THE Soybean Digest

W. J. Morse Retires After 42 Years. (See page 30.)

Official Publication

AMERICAN SOYBEAN ASSOCIATION

VOLUME 10 • NUMBER 2 DECEMBER • 1949

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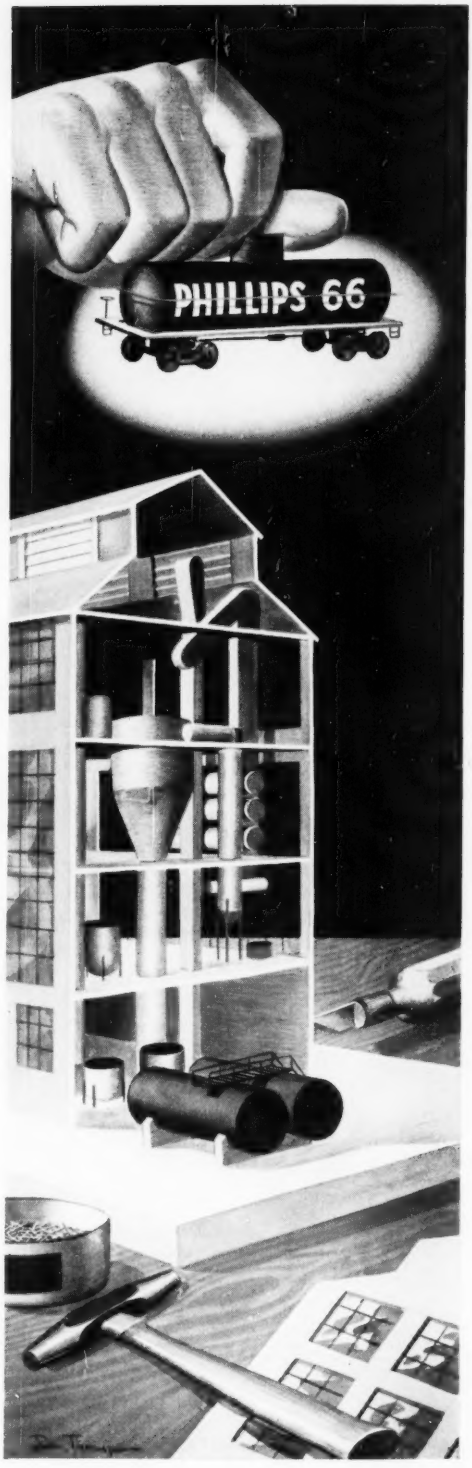

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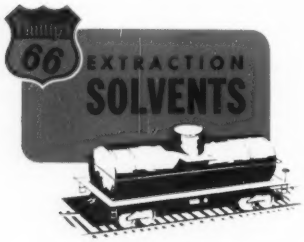

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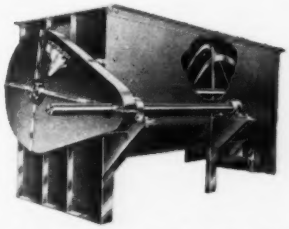

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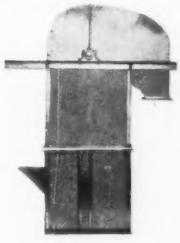

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EDITOR'S DESK

LET GROWER DECIDE ACREAGE

Resolution No. 2 adopted by the American Soybean Association at the September convention reads:

"In view of (1) the need of a sustained and economical source of edible fats and oils to meet our domestic and foreign needs and (2) the necessity of maintaining in this country adequate supplies of protein feed to supply and expanding grassland-livestock production, and (3) the fact that soybeans are the practical crop adjustment factor in both our cotton and corn areas; soybean farmers should forego the benefits of the rigid high governmental support prices extended to the so-called 'basic commodities'. We believe that it is in the best interests of our national agricultural economy to keep the acreage and production of soybeans in this country flexible and voluntary."

Now those governmental officials in charge of the administration of the 1950 farm program are wrestling with details of what they are going to do with the soybean crop. They are considering two courses of action at this writing, according to usually reliable sources. One would include acreage controls and a high support price. The other would include no acreage controls and a lower support price.

The above resolution commits the American Soybean Association to a program of free enterprise, allowing a farmer to make his own decision between crops planted on acreage taken from cotton and corn in 1950. It was the belief of the convention that the unusual role of soybeans in the postwar adjustment period is such that they will find their own levels of consumption and their own price levels based on values —and that they should be allowed to do so unhampered by governmental planners. We believe such a course of action to be the one most conducive to a sound national economy, a sound government, and a sound group of soybean growers.

A JOB FOR PRIVATE TRADERS

The lead editorial in the November issue described our apparent attempts to discourage those European markets for soybeans which should logically be ours. We should be making every possible attempt to prevent further shipments of inferior soybeans—and to supply quantities of this crop which will encourage continued trade.

The return to private trading of all exports of grains and soybeans to foreign countries other than Germany, Greece, Trieste and Japan on Oct. 31 was certainly a great step in the right direction. It will allow business to return to the integrity of individual traders and will enable the buyer to be selective. If he gets poor quality soybeans from a private exporter he can change source of supply now. Before he could not do so. The reputation of a supplier now follows his shipments. In government trading it does not.

The next step should be the return of buying for Germany to private hands. We must first be sure the Germans are ready for such action—it would be folly to return trading to private hands unless we knew it would be handled correctly. The old German cartels which existed in the import business were monopolistic and should not be tolerated. But there are private firms—import-export firms qualified and eager to handle this business.

And at the same time we must take steps to see that soybeans graded out of this country as No. 2 yellow reach Europe in the same condition.

The soybeans which your editor recently saw arriving in German ports were definitely not No. 2 yellow soybeans. Breakage, of course, was high because of the repeated handlings. But foreign material, especially other grains, was present in too high percentages. Certainly there is some way to prevent such contamination. Every possible means should be followed.

If we do not start shipping good soybeans instead of junk we will soon find ourselves shipping *no* soybeans—because we have driven buyers to other sources.

THERE'S A SELLING JOB TO DO

In the eyes of most of Western Europe the United States is not a net exporter of fats and oils. Therein lie some of the marketing troubles we are now encountering. Before the war we imported much more tonnage of foreign oils than we exported in lard. Importers, government officials, the general public in European countries still think of us in terms of being importers of fats and oils, rather than exporters.

Every country in Europe is trying to overcome its own fats and oils shortages by producing oilseed crops at home. Rapeseed is being grown in large acreages as an edible oil source, although the cost of production is ordinarily much greater than the cost of edible oils on world markets. Shortage of dollar exchange is forcing many countries to look outside the United States for relief.

The fact that the United States is now a net exporter has not yet soaked in overseas. The general impression is that we have been able to supply quantities of edible oils and of soybeans because of war-time stimulation of production, but that we do not intend to continue with such production. It is generally believed among Europeans that in a peace-time economy we can not compete, on a price basis, with other parts of the world. The fact that we produce soybeans mechanically, and that they in turn produce more pounds of edible oil than any other crop, is not yet recognized.

We have a selling job to do. It includes educating the buyers of vegetable oils in Europe to the fact that we are in the oil business and that we intend to stay—pricewise as well as otherwise. We must convince them they should be looking for dollars with which to buy our oils rather than for other exchange expendable in other nations. It is an industry-wide job, and one which will be joined by other U. S. oilseed groups.

RURAL VOTERS FOR YELLOW

Voters in the state of Ohio made it known in their recent election that they want the privilege of buying yellow margarine. By a vote of 3-2 proportions they approved the measure to allow manufacture and sale of yellow margarine in that state.

Significant point to the soybean industry is the fact that rural counties in the soybean production area of northwest Ohio voted for the change. It is to be expected that consumer areas would predominantly favor free sale of yellow margarine, but when strictly rural and small town areas exert their votes against the high-handed tactics which have held the second largest market for soybean oil in bondage for 62 years it becomes news.

To Raise Nutritional Levels . . .

GERMANS NEED U. S. SOYA

ASA Secretary Says Germany Cannot Grow Soybeans Economically in Near Future

By GEO. M. STRAYER

"Consistently high yields of cereal and root crops and the relatively low yields of soybeans at the present time, coupled with the ever-present problem of too many people on too little land, make it economically unsound for Germany to produce soybeans commercially," read the first recommendation made to the Minister of Food and Agriculture of West Germany in late October by J. L. Cartter and myself. Cartter, director of the U. S. Regional Soybean Laboratory at Urbana, Ill., and your secretary comprised the membership of ECA Agricultural Technical Assistance Team No. 1 which spent 6 weeks in Germany and surrounding countries studying soybean production, processing and utilization during the months of September and October.

We came back convinced that soybeans can be grown in Germany, that they cannot be grown economically, but that they do offer some possibilities for the future. Few people realize that all of present Germany lies between 47 and 57 degrees latitude, which is north of the Canadian boundary of the United States. The soybean production areas of this country lie between 35 and 45 degrees north latitude.

Swedish breeders, notably Sven Holmerg of Norkopping, together with some German breeders, have produced soybean varieties which will mature in Germany. Daylight hours during summer months are longer, temperatures are cooler, rainfall distribution is different. These factors now combine to make lower yields and consequent uneconomical production. Until such time as the early maturity and the plant height of Swedish and German varieties can be combined with the inherent yield factors of American soybean varieties there can be no economical production of soybeans in Germany —or in any of the northern European countries. Such a program would take, at best, a period of years and completion does not loom in the immediate horizon.

The same factors which make for low yields of soybeans in Germany contribute to the relatively high yields of wheat and other cereal crops, together with the root crops. Average wheat yields, even on soils which have been farmed for thousands of years are well above ours. German yields will run twice those of the U. S. In Holland 1949 wheat yields ran as high as 117 bushels per acre on a 20-acre field. Rye, oats, potatoes, root crops all yield well above our levels.

Cereal Crops Better

Based on these yield relationships the German economy will be far better off to produce maximum supplies of cereal crops and buy the necessary soybeans from outside sources. Foods Ministry officials are convinced this is the course to follow. Even with maximum crops the German population is so dense that 5 to 6 million tons of bread grains from outside sources will be required each year, along with 500,000 to 600,000 tons of oilseeds. Approximately two-thirds the people of old Germany are now concentrated in one-third the area, and that one-third of the area is the least productive of the sections. The black land sections of the old Germany all lie in the Russian zone. West Germany, as it exists today, can never hope to be anything but a heavy importer of foodstuffs.

Protein and fats are the two commodities most short in the German diet. Neither can be supplied in quantity from animal sources. Much as the average German would like all the meat and butterfat and lard and eggs he could eat, he just is not going to get them. Leadership is beginning to realize that they must depend upon vegetable sources for these two commodities.

Immediate inclusion of not less than 3 percent nor more than 5 percent soy flour in bakery goods and bread to improve the protein level and handling qualities was paramount among the specific recommendations made to the German Foods Minister. It was further recommended that provision be made for the blending of soy flour with the wheat and rye flours at a distribution level which would make for most economical handling. A 5 percent soy flour addition would raise the protein level of bread by about 50 percent and at the same time complement the wheat and rye proteins so both became more effective nutritionally.

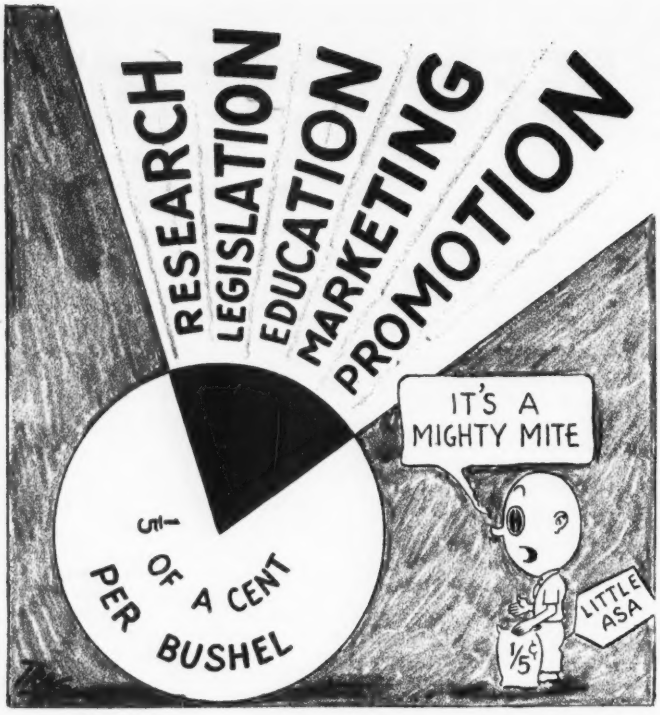
There are three staple items in the German diet. One is potatoes. Another is bread. The third is wurst—what in our nomenclature would be called sausage. They are used in huge quantities.

To further fortify the diet of the average German our recommendations included one aimed toward the adoption by the German government of all measures necessary to facilitate the manufacture, marketing and usage of sausage and meat products containing soy protein in reasonable amounts. Meat costs are extremely high, and blends of meat and soy protein can be marketed at much lower levels. Inclusion of 10 percent soy flour (dry weight) in a product sold on the basis of its own merits at a price proportionately lower than pure meat products offers tremendous possibilities. Such a product at the time we left Germany could have been marketed at a price 25 percent lower than pure meat sausage, and at the same time would be more nutritious.

Determined resistance to this type of product has been made by the German veterinarians. Governmental participation in the soy-meat program promises to overcome this resistance, which takes the form of policing of local butcher shops.

Other recommendations made to the Germans included comprehensive trials of green vegetable soybeans for canning and freezing; continued work on specialty products in the food, candy and confectionary fields where soy protein could be used to raise the nutritional levels; the launching of an educational campaign to distribute factual material on the true food value of soybeans and soy products; investigation of the possible use of hexane in German processing plants to replace the benzine now used; investigation of

(Continued on page 44)



Your Investment Will Make Soybeans Worth More

ACTIVITIES OF YOUR ASSOCIATION

Processors Join Other Groups to Back Program

Support of the American Soybean Association's promotional program by a large part of the soybean processing industry seemed assured as the Soybean Digest went to press.

The plan for processors to join grain handlers and producers in an all-out program to promote markets for soybeans has taken shape and to date 16 Iowa processors state they will take part. Others are being asked to do so. Processors in other states will be given an opportunity to join in the program.

The idea that processors should back the program financially, since they have at least as large a stake as producers in the future of the industry, originated with Iowa processors. A definite proposal was presented at a regional processor meeting held in Des Moines Nov. 20 by Secretary-Treasurer Geo. M. Strayer and Field Director Paul C. Hughes. The meeting was attended by processors from five states.

Processors who sign contracts will invest 50 cents per 1,000 bushels on soybeans crushed in their plants during each month in the Association's program. This compares with the investment by producers of 20 cents per 100 bushels on soybeans delivered to the grain buyer.

The present program of the American Soybean Association originated in 1948 when Association leaders concluded that soybeans would never bring their rightful price or find their full place in the market until the whole industry joined hands to sell them.

Grain handlers were asked to act as collecting agents from producers for the Association program. Since then the program has been set up in parts of Illinois, Ohio, and the Missouri - Arkansas - Tennessee soybean area.

Funds collected by the Association from processors as well as producers will be spent to develop new uses and markets for soybeans as well as to protect markets now existing, and to stimulate government action that will help, not harm the soybean crop.

Participating processors will select an advisory committee to consult regularly with the board of directors of the American Soybean Association concerning plans of action.

Backing by a substantial number of soybean processors will greatly strengthen the Association's program.

* * *

Board of directors of the Association held its annual meeting at Hotel LaSalle in Chicago Nov. 30. A report of the meeting will be carried in the January issue.

BOOKLET ON ASA PROGRAM

Why soybeans are worth more than they some times bring in the market place and how the producer can correct the situation is told in a little booklet recently published by the American Soybean Association.

The booklet is in color and tells its story in few words. (Copy writers were told to cut out all windy explanations). The Digest cartoon character, Little Asa, appears on most pages with a message for the reader. He packs his usual punch.

The booklet, entitled, "Mr. Producer, Don't Be Asleep to Your Future," informs the producer what his stake is in the "Soybeans Are Worth More Money" campaign of the Association.

States the booklet, "Soybeans have always been priced too low because we until recent years have not had the means of utilizing their full worth in food and industry.

"You can help make soybeans actually worth more money—to you and every man who grows soybeans by investing a small amount from the proceeds of your soybean crop with the Association.

"Tell your dealer to deduct one-fifth cent per bushel from your check when you deliver your soybeans. He will remit the full amount paid in by you and other growers to the American Soybean Association.

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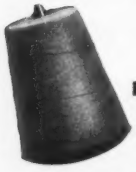

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—Des Moines Register Photo

Alternate row planting of corn and soybeans was tried with gratifying results this past year by John Mullins, Britt, Iowa, hybrid seed corn producer. That's Mullins in the picture.

Alternate Planting

You can plant every third row in your cornfield to soybeans and still harvest as much corn as though you planted the whole field to corn. This system makes the beans purely a bonus crop.

That's what John Mullins, Britt, Iowa, hybrid seed corn producer, has decided after a year's trial, as reported by Glenn Cunningham in the Iowa Farm and Home Register.

Mullins planted most of 600 acres on his farms to the corn-soybean combination this past year. By this system he figures he got as much corn from 425 acres as he would have produced from the whole 600 acres if planted to corn alone. And he harvested 4,000 bushels of soybeans in addition!

He got between 20 and 25 bushels per acre from the rows planted to soybeans.

Mullins tried out the plan developed at the University of Illinois by A. L. Lang and A. R. Hilst and described in the May, 1949 issue of Soybean Digest. But he did not follow their plan exactly. The University men planted corn and beans in alternate double rows 40 inches apart. Mullins alternated a single row of beans with two rows of corn, and the rows were 36 inches apart.

Mullins obtained a 102-bushel

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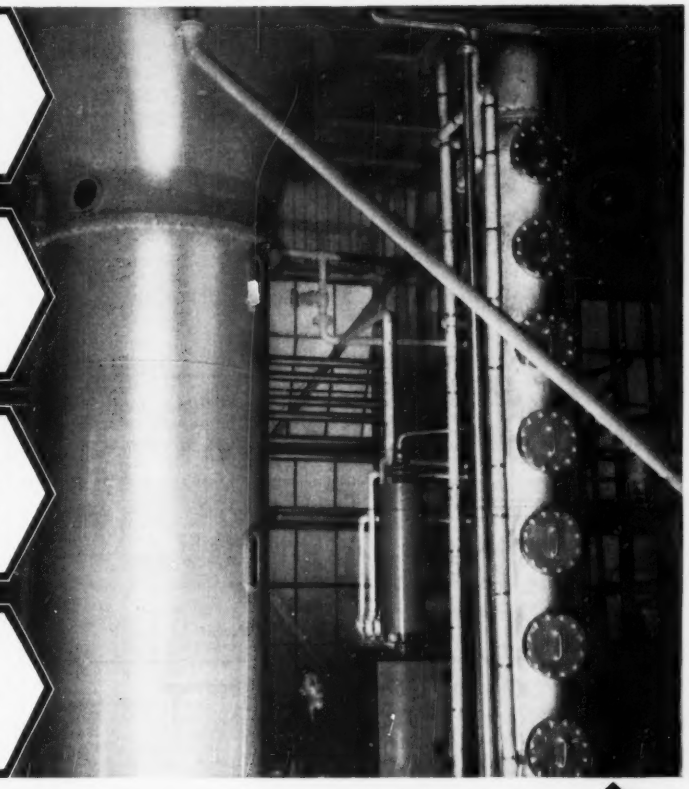

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corn yield on his best soil, compared with a yield of 66½ bushels in the same field when it was planted to corn alone the year before. But on less fertile soil the per-acre-corn-yield increase through the use of soybeans was 25½ bushels, he says.

Mullins plans to repeat the planting next year. But instead of a single row of soybeans he will plant a double row 18 inches apart, then two rows of corn. There will be 30 inches between corn and beans on each side.

That way there'll be 6½ feet of practically open space on either side of every two rows of corn. That makes each corn row an outside row, according to Mullins.

Farmers who do not have access to self-propelled combines will have trouble harvesting the beans when grown with the corn, it is pointed out. There is not room between the corn rows for a tractor-drawn combine to operate.

Defoliation Success

Excellent results were obtained from artificial defoliation of 542 acres of soybeans this year on Valley Farms at Wrights, Ill., H. I. Cohn, Sr., reports.

Defoliation was especially effective in control of late maturing weeds Cohn says. Twenty acres of weedy Lincoln soybeans were sprayed for Maynard Dotson, a Valley Farms tenant, using a plane that applied 2 gallons of chemical to the acre. When Maynard combined the field the weedy part yielded about as much as the clean section of the field. The Lincolns averaged over 30 bushels to the acre.

If the field had not been sprayed Dotson says he would not have been able to get into the field until December, if then.

A field was also sprayed for Dotson's brother, Ira, with equal results. Ten acres of the latter field probably could not have been combined otherwise because of the heavy growth of cockleburs, jimson weed and horseweed.

For the spraying, in cooperation with some of the chemical firms, several formulations were used, of which Shell No. 130 containing pentachlorophenol was the main constituent. These formulations were applied in varying amounts and concentrations. It was decided that the 2-gallon-per-acre application was the most practical from the standpoint of cost.

"It was interesting to note that a good many of the weed seeds were killed by the spraying and it is hoped that further tests will produce a material which, when properly applied, will greatly reduce such weeds as cockleburs for the season following," says Cohn.

This self-propelled spray cart was designed by H. I. Cohn, Sr., in cooperation with the Everglades (Florida) Experiment Station. Its spindles are reversible and the rear wheels will fit between almost any width rows. The implement was used to spray 2,000 acres on Valley Farms, Wrights, Ill., both for insect and weed control, in 1948. Cohn believes the implement can be used on almost any type of field for spraying.

Remington Show

The 12th annual Remington (Ind.) Soybean Show will be held Dec. 13 at the Remington high school building, according to the Remington Service Club. The club sponsors the annual event in cooperation with the vocational agriculture department of Remington and the extension service of Benton and Jasper Counties.

Speakers will include E. W. Busche, Monroe, Ind., who will speak from firsthand information on "Soybeans and Europe;" and J. W. Calland, managing director of the National Soybean Crop Improvement Council, Decatur, Ind., on "Wild Statements about Soybeans."

Extension Agronomist K. E. Beeson, Purdue University, will lead a roundtable discussion.

Support Level

An economist in the Illinois College of Agriculture, Urbana, says he expects the soybean price support loan level in 1950 to be between $1.35 and $1.70 a bushel.

That's the forecast of L. H. Simerl, who adds, "There appears to be little inclination to impose acreage allotments for soybeans in 1950."

Simerl says farmers will probably increase their soybean acreage sharply next year.

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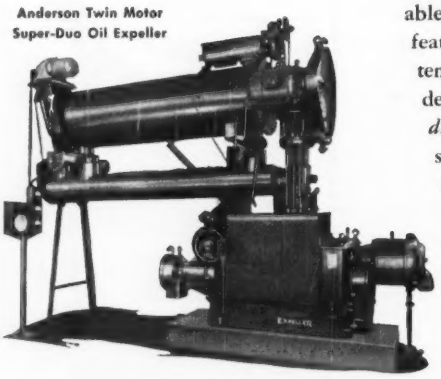

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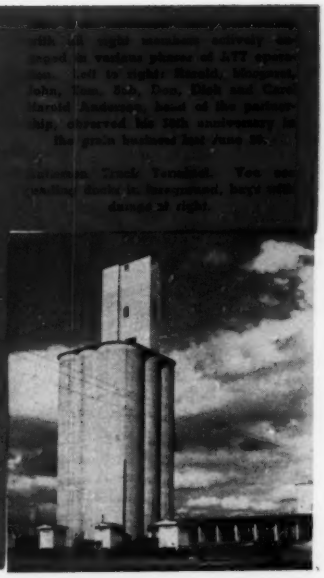


THE NEW LOOK IN GRAIN ELEVATORS?

By PAUL C. HUGHES

Have the Anderson family of Maumee, Ohio, designed the new look in grain elevators? Some grain men think so.

The Andersons call it a truck terminal. The basic design is a large semi-terminal elevator with amazingly large facilities for handling trucks. It is located in the center of a good grain area.

The design is carried further by paying the same price to both elevators and farmers; and paying mileage to those who bring their grain from a distance.

The Anderson truck terminal is a 500,000-bushel elevator located in Maumee, Ohio, just inside the Toledo switching area. It is owned and operated by the Anderson family of eight.

The basic idea calls for a large volume of grain to be trucked in. Facilities are built to handle the greatest number of trucks in the shortest possible time.

The first thing that strikes you as being different from the ordinary elevator is four small buildings that look like ice houses with loading docks. These are the grain grading docks. Here a grader can take a sample of grain without having to climb onto the side of the truck. After the sample is taken the truck is weighed and sent to one of the nine bays of the unloading section.

Here you note the second difference from a conventional elevator. The long unloading apron of the elevator contains nine bays with a total of 29 dumps. There are facilities for semi-trucks and trailers, and for ear corn and small grain.

Having so many dumps it is possible to take in more than one kind of grain at a time or to dump various grades separately. The flow from the dumps can be so regulated that the various grades can be blended right from the dump.

The total capacity of the dumps is 30,000 bushels. The terminal can handle 10,000 bushels an hour.

Youthful Tom Anderson, manager of ATT, is optimistic about the future prospects of the truck terminal. He believes there will be many more like it built on good rail or water facilities 50 to 75 miles apart throughout the Midwest grain area.

Optimistic he has the right to be. The average grain elevator would be happy with a yearly volume of a million bushels. But Tom has run 2 million bushels through the Anderson elevator in the 4 months of July, August, September and October.

The biggest day this year was July 5, with 141,000 bushels. It is expected that a total of 500,000 bushels of soybeans will be handled this year.

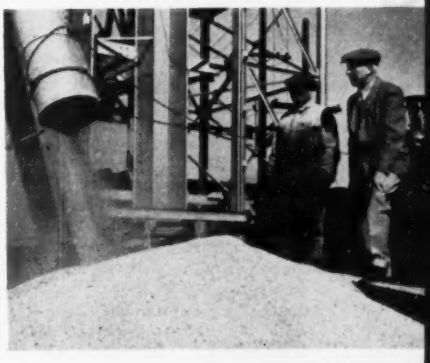
In an area with as many elevators as the tri-state region of northwest Ohio, southern Michigan and northeast Indiana, how do the Andersons get such a volume?

First, they offer the farmer more money for his grain. This is made possible by their large handling facilities and volume marketing.

Second, the Anderson terminal isn't hiding its light under a basket. Two early morning radio broadcasts, one from Fort Wayne, Ind., and the other from Toledo, Ohio, tell farmers in a 50-mile radius what the Andersons are paying for grain each day. The farmer, with a call to his local elevator, can quickly tell if it will pay him to sell to ATT in Maumee on that particular day.

(Continued on page 26)

Harold Anderson (right), head of the Anderson Truck-Terminal, Maumee, Ohio, watches part of 100,000 bushels of soybeans being loaded into the S. S. Blue River at the Anderson docks on the Maumee River for shipment to Three Rivers, Quebec. The Blue River is one of four similar shipments arranged by Anderson for storage or export shipment at Canadian ports.



Oilseeds for Cotton States

Sesame plantings at the Texas Research Foundation are examined by representatives of the cottonseed crushing industry. A. L. Ward, author of the accompanying article; W. L. Weber, Taft, Tex., member of the production research committee of the National Cottonseed Products Association; Dr. R. R. Kalton, Texas Research Foundation; S. J. Vaughan, jr., Hillsboro, Tex., director of the National Association; and Dr. L. C. Curtis, Association agronomist are shown.

Widespread Work on Soybeans and Other Oil Crops Is Underway in the South and Southwest

By A. L. WARD

CAN SOYBEANS be raised in large areas of the Cotton Belt where they have not grown in the past?

Are there other oilseeds, such as sesame, okra, sunflowers or wild gourds, that can be adapted to commercial production in cotton states?

The answers to these questions, which are of interest to the soybean industry as well as of vital importance to the cottonseed crushing industry, are the objective of widespread activities that have been underway in the South and Southwest for the past 2 years.

As the national organization of cotton oil mills, the educational service of the National Cottonseed Products Association is working closely with experiment station and extension service leaders, farmers, individual crushing mills, state crushing associations and many others in these activities.

For practical purposes, these oilseeds activities in the Cotton Belt may be divided into three major divisions:

1—Trial plantings of soybeans, chiefly in Alabama and Georgia, arranged in most cases by individual oil mills.

2—Research with promising new oilseeds crops at research institutions, and

3—Trial plantings of sesame and okra in 1949 to obtain facts needed to supplement basic information secured by research authorities.

Present progress of these oilseed programs can be better understood after a brief summary of why and how they began. The large crushing capacity at oil mills in cotton states has for many years exceeded the tonnage of cottonseed available for crushing. Soybeans, flaxseed and peanuts have been found suited for production and crushing in a number of sections, but large areas remain where farmers and oil mills need supplemental oilseed crops. With governmental acreage reduc-

tion programs, this need will be more widespread and more acute in the future.

Recognizing these factors, in 1946 the directors of the National Cottonseed Products Association authorized the educational service to survey the oilseeds situation in cotton states. This survey resulted in a recommendation, which was approved by the Association, that the Association have an oilseeds research program with a full-time agronomist employed to work with research institutions and others, including the members of the educational service staff who were already working with agricultural and livestock leaders in cotton states.

Oilseeds Committee

Because of the importance of this oilseeds program, a special committee of the National Association has been maintained since it was started to supervise and advise with the educational service on these activities. The chairman of this production research committee is Edgar Lawton, president, Hartsville Oil Mill, Hartsville, S. C.; and members are W. F. Guinee, vice president, The Southern Cotton Oil Co., New Orleans, La., and W. L. Weber, vice president Taft Cotton Oil Co. Taft, Tex.

About the same time, a number of oil mills in Georgia and Alabama became interested in sponsoring trial plantings of soybeans in areas which had not been successful in growing this crop in the past. Southeastern Field Representative, J. Van Rogers of the educational service of the National Association worked closely with them in planning and developing these trials, which have also had most valuable cooperation from individual farmers, county agents, experiment station and extension leaders, state cottonseed crushing associations and other agricultural representatives of commercial organizations interested in a more diversified program for the Southern farmer.

Dr. U. R. Gore of the Georgia Experiment Station, Experiment, Ga., has been a great help to many individual oil mills, investigating soybeans as a potential oil crop and supplemental raw crush. On many occasions he has met with oil mill personnel to discuss varieties of soybeans best adapted to Georgia and Alabama. He has run not only field tests of different varieties of soybeans, but numerous fertilizer tests to determine best rates of fertilizer application. He has been more than cooperative with the educational service staff of the National Cottonseed Products Association in furnishing seed stock for variety tests in many sections of the Southeast. Dr. Gore, in addition to running analysis on his own plot work with soybeans, has repeatedly run tests of beans grown elsewhere in order to have as wide a range of soybean research as possible. In cooperation with the U. S. Department of Agriculture, Dr. Gore is now testing prospective soybean varieties which the Department of Agriculture has developed. Dr. Gore is not only a soybean enthusiast but also a recognized authority regarding soybean problems in Georgia.

Frequent visits to the trial plantings were made by Rogers in 1948 and information compiled as to results. These results were then made the basis of recommendations for practices to be used in the 1949 plantings, and the recommendations were sent by Rogers to the sponsoring mills and farmers, county agents and others who were cooperating in the trials.

1949 Soy Trials

During 1949, oil mills again sponsored soybean trials after which the results were compiled and further recommendations for future plantings based upon experience gained during the two years. Especially helpful in evaluating results of the 1949 trials was the trip which Dr. E. E. Hartwig, agronomist in charge of the federal soybean research at Stoneville, Miss., made last July with Rogers to inspect these plantings.

While results of these trials vary, it is the opinion of Association Agronomist Curtis, Field Representative Rogers, and others working on this program that they offer encouragement for further efforts to expand the area in the Southeast in which soybeans can be raised. Both the results to date and the need for supplemental crops in Alabama and Georgia should encourage the full cooperation of all of the agencies that are working on this soybean program.

A rather interesting success story regarding soybeans in Florida might be mentioned. The story is about J. T. Murphy, manager of The Southern Cotton Oil Co. mill at Pensacola, Fla. Murphy, a genial and aggressive Irishman, began to look for something to supplement his present tonnage of cottonseed, thereby allowing his mill to operate

Dr. U. R. Gore, of the Georgia Experiment Station, who is a recognized authority on soybean problems in Georgia.

the year round. He studied varieties, cultivation and harvesting practices. He brought soybean experts down from soybean sections. He then got farmers interested, and trial plantings soon dotted western Florida along the Gulf and Alabama line. Today, Murphy has a very substantial crush and a modern, up-to-date mill running almost the year round.

In addition to this soybean development in west Florida, valuable soybean variety tests are being conducted in cooperation with the educational service by Dr. A. H. Eddins at the Potato Investigation Laboratory at Hastings.

Progress of the work with the other oilseed crops is most encouraging also. Following the authorization of the research program by the National Association, mentioned

J. A. Martin studies sesame plants used in the research program at Clemson, S. C.

previously, Dr. Francis E. Johnstone, Jr., now at Ohio State University, was employed as agronomist with the cottonseed crushing industry's educational service and made a careful survey of research developments and needs in cotton states. Dr. Johnstone's valuable contributions have been carried on since his resignation in 1948 to accept the Ohio position, by Dr. Lawrence C. Curtis, widely known for his research with squashes, gourds and other plants.

For its program of cooperation with research institutions in cotton states, the National Cottonseed Products Association selected several potential oilseed crops which offered promise and seemed deserving of more research than had been possible in the past.

Sesame was one of these promising sources of oil and protein. Sesame is commercially produced and crushed in many countries, where labor costs permit harvesting by hand. It grows well in the southern part of the United States, from the Carolinas to California, but has not been an oilseed crop of commercial importance in this country.

Sesame's limitation for production in the United States has been the fact that, in its present form, it cannot be harvested with machinery because of shattering of the seed pods as they ripen. The breeding work by J. A. Martin, at Clemson, S. C.; Dr. D. G. Langham, in Venezuela; and others offer promise of correcting this weakness and caused the selection of sesame for research cooperation by the National Cottonseed Products Association.

Okra was selected as another promising crop because of the work that had been done by Dr. Julian C. Miller of Louisiana State University. Okra grows well where cotton grows and is akin to cotton, can follow small grains, and will continue to produce until frost. After frost, it can remain in the field for mechanical harvesting later. Okra's chief limitations are in yields of seed per acre and in oil content of the seed.

Sunflowers, which are a commercial oilseed crop in Canada, Russia and some other countries, were selected for research because they grow well in many cotton-growing states. Sunflowers are being studied especially with reference to controlling the insects which are a limiting factor for the crop in the Southwest.

The National Cottonseed Products Association does not conduct research, but works to encourage and aid established research institutions in investigations of these oilseed crops, and to help in seeing that the information obtained through research is carried to producers.

At this time, the Association has grants-in-aid at Clemson Agricultural College, Texas Research Foundation, Louisiana State University and with the Texas A. & M. College system.

Progress of the investigations with sesame and okra during 1948 justified trial plantings of these two crops in 1949, in order to obtain needed information on yields, cultural practices and other factors influencing the crops at different locations in the cotton states.

Following a series of meetings with oil mill representatives in the Southeast and Mississippi Valley states last winter, a number of oil mill managers and the state crushing associations purchased planting seed for use in trial plantings by farmers and experiment stations. In Texas, the Texas Cottonseed Crushers' Association also provided seed and made arrangements for planting trials.

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Dr. Curtis, Mr. Rogers and Dalton E. Gandy, Mississippi Valley field representative of the National Association, have inspected these plantings during recent months. Their reports to date, and future reports that will be compiled on final results, will be of much value in future work with sesame and okra.

The holding of the First International Sesame Congress at Clemson College, S. C., last August, was a milestone in research with this crop, bringing together research leaders of the United States and other countries and resulting in valuable exchanges of information.

Members of the cottonseed crushing industry and research leaders working with these oilseed crops recognize that the finding of new sources of vegetable oil and protein feed is no easy task. They do not hope for quick results, but believe that a good start and progress have been made toward a goal that is of importance to farmers and oilseed crushers of cotton states, and of value to the entire country.

—s b d—

FIBER STORAGE

Fabrics that have in them fibers from foods, such as peanuts, milk and corn, are going to need storage protection against warmth and dampness, Dr. Margaret T. Goldsmith, U. S. Department of Agriculture bacteriologist, reported to the Society of American Bacteriologists meeting in Cincinnati recently.

Such fibers made from protein may be attacked by molds and other airborne microorganisms that flourish in the soil in humid places, her experiments demonstrate.

To learn the extent of likely damage to man-made protein fibers, Dr. Goldsmith exposed fibers from peanuts, soybeans, corn and milk to a microorganism which she knew would damage the natural protein fiber of wool.

Breakdown of fibers made from peanuts, milk and corn was greater than that in fiber from soybeans. Wool fibers, tested for comparison, were broken down slightly more than soybeans.

Even soybean fibers deteriorated enough to warrant a conclusion that protein fibers in general need protection against microorganism that thrives in damp, hot and poorly ventilated storage conditions.

Separated milk with soybean oil equals whole milk as a calf feed, Iowa Experiment Station resul:s show.

SOY OIL VS. BUTTERFAT FOR CALVES

Separated milk with hydrogenated soybean oil added produced growth in young dairy calves equal to the growth of calves fed whole milk in an experiment made at the Iowa Agricultural Experiment Station. There was no significant difference in gain in weight, increase in height at withers, incidence of scouring, or in physical appearance between the two groups.

Since one of the major expenses in raising dairy calves is the whole milk fed, many experiments have been conducted to determine whether a milk in which a less expensive fat or oil has been substituted for butterfat might be equally as satisfactory as whole milk as a feed for young calves.

In the experiment, each calf was allowed to remain with its dam for 3 days immediately following birth. On the fourth day, the calf was transferred to the experimental milk.

Calves were given no feeds other than experimental milk, and vitamin and mineral supplements. Each calf received daily a gelatin capsule containing approximately 5,000 U.S.P. units of Vitamin A and 1,000 units of Vitamin D. In addition approximately 25,000 units of Vitamin A per 100 pounds body weight were fed to all calves daily during the first 10 days of the experimental period.

Other findings in the experiment show that the growth and general appearance of calves fed hydrogenated soybean oil were in sharp contrast to calves fed crude screw press soybean oil. The latter showed poor growth, severe scouring and high mortality. Supplementation of rations of young calves fed a filled milk containing 3 percent crude screw press soybean oil with various members of the Vitamin B complex, ascorbic acid and mixed tocopherols failed to improve growth or reduce scouring.

The fact that hydrogenated soybean oil can be fed successfully, but probably requires homogenization, brings up the problem of finding a practical way to feed it.

Results of more recent studies indicate that hydrogenated oil may deteriorate with age. Fresh oil gave the same results as noted above, while oil a year or more old did not give as good results.

—s b d—

CANADA'S OILS DOWN

Canada's 1949 oilseed production totals only 24 percent of last year's output, according to the information from the American Embassy, Ottawa, reports USDA's Foreign Crops and Markets.

The decrease was due to the drastic cut in flaxseed production from 17.6 million bushels in 1948 to 2.3 million bushels in 1949. Acreage fell from 1.9 million acres to 300,000 acres.

HEDGING PROBL

By C. E. ROBINSON

Futures Trading Analyst, U. S. Department of Agriculture.

SOYBEAN CRUSHERS face almost constantly the possibility of price declines between the time when beans are bought and the time crude oil and meal are sold. Unless they make forward sales of spot crude oil and meal in an amount equal to their bean purchases or place hedge positions in the futures market, they are forced to assume a speculative risk, that is, the risk of price change between the time of purchase and the time of sale. The choice between these alternative methods of minimizing price risks must be made by the mill management.

Faced with this choice, many are uncertain as to what use they could or should make of the futures markets. Some look upon futures trading largely as a means of gambling, and will deny that crushers can make any worthwhile use of the machinery of futures trading under any circumstances. At the other extreme, there are claims that the futures market provides an answer to all of the price protection problems of the mill manager. Some even believe that by use of the futures market for hedging purposes it is possible to create profits where none exist.

The futures markets on which soybeans and soybean products are traded are:

The soybean market conducted by the Chicago Board of Trade, the crude soybean oil market recently inaugurated by the New York Produce Exchange, and the soybean meal market conducted by the Memphis Merchants Exchange Clearing Association.

To use these futures markets effectively for hedging purposes, a manager should know something about the machinery of futures trading and the nature of the futures contracts.

An exchange, such as the Chicago Board of Trade, is merely a meet-

Top, left, traders exchange soybean futures contracts in the Chicago Board of Trade pit. Bottom left, trading in soybean oil meal futures on the Memphis Merchants Exchange.

MS OF SOYBEAN OIL MILLS

To Use Futures Markets Effectively Processor Needs Good Knowledge of Them

ing place where brokers make transactions in accordance with certain rules. These rules have been worked out in great detail for the purpose of avoiding disputes and misunderstandings that would inevitably arise if much business of this kind were to be carried on by private agreements. The exchange itself merely provides machinery to facilitate trading.

Every trade made in futures is subject to the rules of the exchange governing such trades. These rules become part of the contract terms as fully and as effectively as though written into a separately executed agreement. For this reason, those interested in futures trading should be familiar to some extent with the exchange rules. Otherwise they will not be aware of the rights as well as the obligations that constitute the essence of their contracts. Obviously, a manager cannot intelligently determine his course of action in futures without knowing the nature of the futures contract in its legal as well as its economic aspects.

Nature of Hedging

If cash crude oil prices and futures prices always moved up or down together, and by exactly the same amount, it would only be necessary, in order to be protected against loss through price changes in the cash market, to take an exactly opposite position in the futures market. Any loss in one market would be offset by a compensating gain in the other market. Thus explained, hedging appears to be a very simple process. Unfortunately, an explanation of hedging is not a formula for hedging, as some have learned through bitter experience.

Hedging involves more than just maintaining an even balance between spots and futures. To hedge successfully, a mill manager should be constantly alert to the various possibilities and opportunities that present themselves, and be quick to sense when changing conditions require changes in policies and methods.

Some writers have classified hedging as a form of insurance. The protection purpose is apparent. The insurance form, however, is not so evident. Insurance contracts undertake the shifting of risk. The insured person has only to fulfill his part of the contract to receive in full measure the protection bargained for. In the case of hedging, however, the hedger not only holds the original risk, but takes on another risk, as nearly as possible of opposite character, in the expectation that loss from one will be offset by gain from the other. He deals constantly with two risks instead of one, and it becomes his own individual business to so balance these risks that they will give a compensating result.

The matter of changing relationships between spot crude oil prices and future prices is of vital interest to those who seek to use the futures market for hedging purposes. This factor more than any other determines whether a hedge is effective.

Hedging transactions are the sale of futures to the extent that such sales are offset in quantity by the ownership or purchase of the spot commodity or, conversely, the purchase of futures to the extent that such purchases are offset by forward sales of the spot commodity. For example, if a mill has on hand

Trading floor of the New York Produce Exchange. In right background are quotation boards, with soybean oil between cottonseed oil and black pepper.

25,000 bushels of beans, then the sale of 25,000 bushels of soybean futures would be a hedge. Similarly, if at the beginning of the season before beans were purchased, a mill sold the oil and meal equivalent of 25,000 bushels of beans for forward delivery, the purchase of 25,000 bushels of soybean futures would be a hedge.

The futures market is frequently used by crushers to replace spot oil risks with risks in the futures market. There are times when this may be done to advantage, but these transactions should not be confused with hedging. The sale and delivery of crude and the repurchase of an equivalent amount of futures is not hedging in any sense. It is merely a change in the form of risk.

Hedging Problems

Since the hedging problems facing individual mills differ and since conditions affecting hedging policies vary widely from time to time, it is impossible to make generalizations which will be valid in all cases. For that reason no attempt will be made to formulate specific hedging programs, nor is it intended to suggest a more extensive use of futures for hedging purposes.

Some soybean crushers seem to find it advantageous to use the soybean futures market for hedging purposes. Trading on this market has been active during the past year. The soybean futures market should offer considerable protection in connection with inventories of beans held by crushers, but, of course, has distinct limitations so far as protecting processing margins is concerned. Hedging in soybean futures necessitates very close watch of the market because of the danger that soybean futures prices may get out of line with their normal relationship to crude oil prices.

Other crushers have preferred the cottonseed oil futures market, believing it more readily reflects spot oil prices. From a commercial point of view, it may be possible to obtain price protection on soybean oil in this market, but ever present is the danger that the futures price for bleachable prime summer yellow cottonseed oil may vary widely from the spot price of crude soybean oil.

Some hedgers are beginning to use the new crude soybean oil futures market of the New York Produce Exchange. Thus far, however, the volume of trading on this market has been small.

With regard to soybean meal, the available hedging medium is the meal market conducted by the Memphis Merchants Exchange Clearing Association.

Choice of Futures

The selection of the best future in which to place a hedge requires the exercise of a great deal of care and judgment. Consideration must be given to the price relationships between the different futures and also to the maturity date of the future. On the surface it would appear best to sell the future which is highest in relation to the others. This, however, is not at all times advantageous. For example, in an inverted market when the distant futures are selling at a discount under the near future it may be extremely hazardous to assume a short position in the nearby or maturing future.

C. E. ROBINSON

There have been many unfortunate experiences in the last 2 or 3 years resulting from sales in the near future by hedgers who were not in a position to make actual delivery. Even though the near future was high in relation to the others at the time of the sale, it advanced still further before maturity, causing heavy losses in some instances. In most of these cases the sale of a more distant future would have provided better protection, even though that future was lower in price at the time the hedge was put on. The important consideration is the variation in the spread between the future and the crude oil being hedged.

No hedge provides complete insurance against price risks. The constantly changing relationship between prices of crude and futures prices cannot be eliminated by hedging. In general, however, the risks incident to these changes in price relationship are much less over the long run than the risks in carrying completely unprotected positions.

The Time to Hedge

Many traders attempt to wait for a favorable price situation before placing their hedges. By so doing they are actually carrying their spot position unhedged until such time as they place their future commitments. At times it may be advantageous to follow this policy. For example, if a futures market were temporarily depressed because of some technical situation such as the setting-off of "stop-loss" orders, it might be well to hold off hedges until the market recovered. However, one must always remember that in attempting to pick a proper time to place hedges he is assuming a price risk during the interval from the time he purchases his beans until the time he sells futures.

Type of Order

In giving a broker an order to execute futures contracts one may give an order to execute at the market or at a specific price or at a specific time.

The market order will be executed as soon as the order reaches the ring. The limit order will be executed only when the specific price is reached or at the given time. The problem here involves the risk that if one places a limit order it may never be executed at all, while the market order is certain to be executed, but perhaps at an unsatisfactory price. Again, the exercise of judgment is necessary with proper consideration for current market conditions and the degree of urgency for placing hedges.

Some hedgers give limit orders specifying that the order be executed at the market on the opening or close. Oftentimes such orders result in poor executions because there may be a preponderance of buying or selling orders to be done at the opening or closing calls, thus causing prices at such times to be somewhat off from the general level of prices for the day.

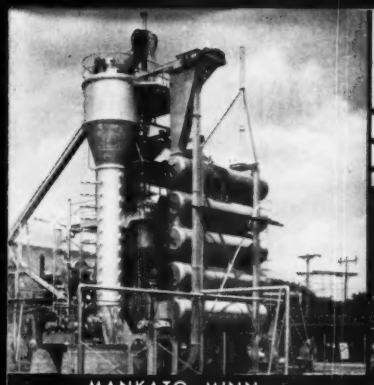
Watching Positions

Once a hedge has been placed, it must be watched constantly.

If a crusher has short hedges and notices that the market or the future is getting out of line, that is, rising in relation to crude, it might be wise for him to cover his position or to shift the hedge to a more distant future.

If oil or meal hedged by a sale of a December future, for example, has not been sold as the maturity of the December future approaches, it may become necessary to buy in the December and make a new sale in the March future. The time when this transfer can best take place oftentimes becomes a matter of extreme importance.

Perhaps the most unfortunate experience of hedgers has come about through carrying a position too close to the maturity date of a future.



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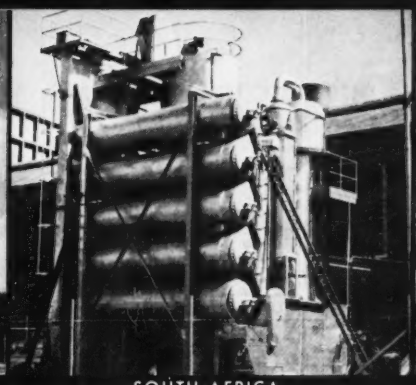

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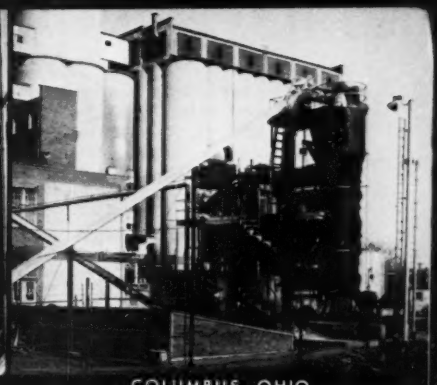

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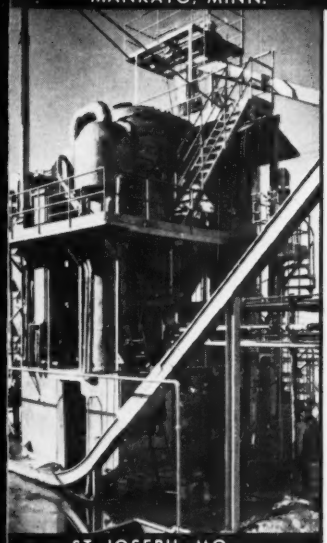

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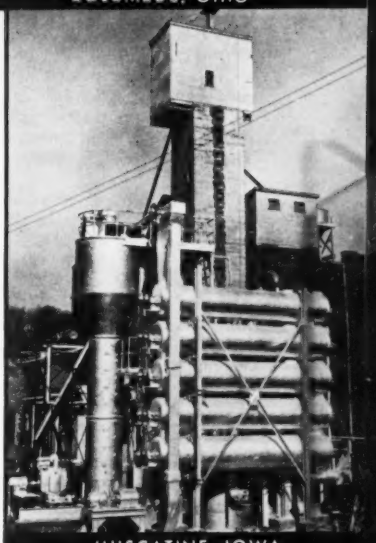
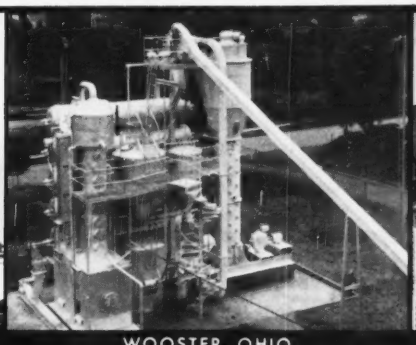


MUSCATINE, IOWA

RED WING, MINN.



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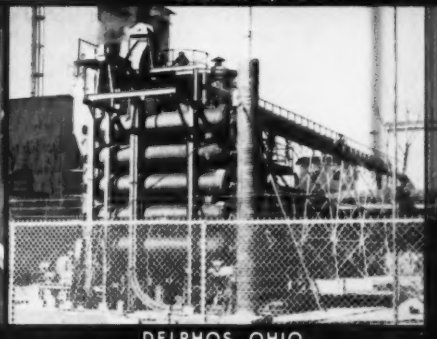

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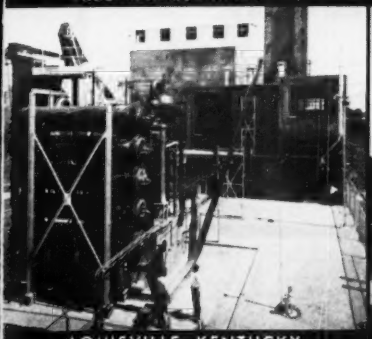

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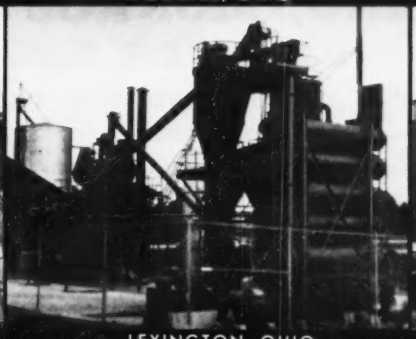
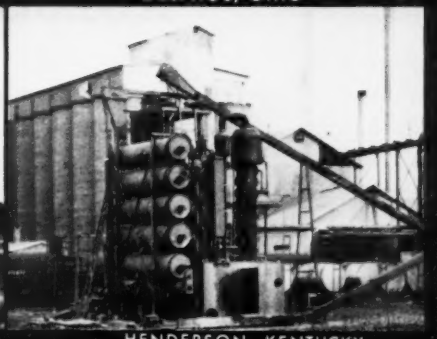


LEXINGTON, OHIO



HENDERSON, KENTUCKY

This is particularly true in the case of a short hedger when the market is "tight." Once the price relationship becomes unfavorable the tendency is to postpone shifting the hedge to a forward month in the hope that prices will move back in line; in other words, to put off facing the fact that you have overstayed the market. Many experienced hedgers feel that a short hedge should be transferred not later than the middle of the month preceding the delivery month, except in circumstances where delivery can be made if the market gets out of hand. Special attention should be given to an early shifting of hedges when it appears that the nearby spot situation is tight. Under such conditions the longs in the market will be disposed to keep their contracts open. The danger of an advance in the current future relative to the next deferred future increases, and hedgers short may be able to shift their hedges only at an additional loss.

Success in hedging does not depend on the simple act of placing a hedge. As in other merchandising fields, experience and "know-how" are the keys to success in hedging.

—s b d—

LARD PRESERVATIVE

Adding 2 or 3 pounds of hydrogenated soybean oil to each 50 pounds of lard is a simple and practical way of improving the keeping quality of home-rendered lard, according to chemists of the U. S. Department of Agriculture.

Each year much lard turns rancid before it is used. This results mainly from the action of atmospheric oxygen on the lard. Adding soybean oil or other vegetable shortening supplies a harmless substance on which the oxygen will act in preference to the animal fat.

PUSH FOR FEDERAL MARGARINE REPEAL

Ohio became the 32nd state to permit the manufacture and sale of yellow margarine on Dec. 8. The Ohio law was repealed in the special referendum 1 month earlier. Vote was 1,282,343 to 793,195.

Observers believe the Ohio victory greatly strengthened margarine's chances of repealing federal taxes and license fees when Congress reconvenes Jan. 3. The repeal bill (HR 2023) is still slated to be the Senate's first order of business.

Cotton Trade Journal reported that Senator Robert Taft of Ohio is certain to join the drive for an early vote on the bill. Taft made it clear before the Ohio election that he would be guided by the outcome, according to the Journal.

Ohio was the 13th state since 1944 to repeal its ban on yellow color. The issue reached the polls as the result of initiative petitions signed by more than 400,000 voters. It was the first test of the margarine question by popular vote.

Immediately after the referendum margarine groups began making plans for the next Congressional session in the light of the Ohio victory. They are gearing up for a redhot campaign to push HR 2023 through the Senate before the end of January. The bill has already passed the House.

Margarine in Canada

Virtually all oils used in Canada's new margarine industry are imported, mainly from the United States, according to USDA's Foreign Crops and Markets. Thus a new market outlet for United States products has developed almost overnight. Starting in January this year from no production at all, Canada's margarine output rose rapidly to an average of 6.75 million pounds a month for the March-September period. This is at the rate of 81 million pounds a year, requiring about 65 million pounds of refined fats and oils.

Of the 5,685,000 pounds of various oils used by Canadian margarine plants in August, for example, 60.5 percent was cottonseed oil, and 23.1 percent was soybean oil. The remaining 16.4 percent was coconut oil, peanut oil, marine oils, palm oils and oleo oil, in that order of diminishing importance. Except for a little marine oil used by one manufacturer in Newfoundland, all the raw materials were imported.

The bulk of the oils are imported as crude vegetable oils. Some of the margarine makers, particularly the small ones, buy some refined cottonseed oil and also hardened cottonseed or soybean oil. Some makers buy these supplies direct from the States and others buy from Canadian refineries.

Future imports from the United States for margarine raw materials will depend on the Canadian oilseed production program. Soybeans are one of the few sources of edible oils for margarine manufacture that can be grown profitably in Canada and growers have been encouraged to expand acreage in order to minimize reliance on imported oils. Presumably the soybean oil requirements for margarine could soon be met from Canadian production, depending on future crops and the proportion of soybean oil used in the formulas.

The report of Foreign Crops and Markets is based on a report by Francis A. Flood, agricultural attache at Ottawa. A more detailed account by Mr. Flood will appear in an early issue of Foreign Agriculture.

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St. Louis • Salina • Salt Lake City • San Francisco • Seattle
Wichita

What Supplements

TO SOYBEAN OIL MEAL ARE NECESSARY FOR POULTRY?

By C. W. CARRICK
Professor of Poultry Husbandry
Purdue University
Presented at Soybean Processors' Convention, Lafayette, Ind.

THE TWO PRINCIPAL quantitative nutritional needs for poultry are energy and protein. The energy needs are much the greatest. In this area yellow corn is usually the most practical energy feed and soybean oil meal the most practical protein feed. Both corn and soybean meal, however, are deficient in certain vitamins and minerals. Therefore, our practical problem in poultry feeding is to supplement corn and soybean meal.

The principal protein of soybean meal is glycinin, a globulin and a well balanced protein. The nutritional value of soybean oil meal protein has been demonstrated to be of excellent quality by means of biological and chemical measurements.

There has been and still is considerable confusion concerning the relative nutritional value of the proteins from animal and plant sources. This confusion has been due largely to the failure to recognize that the vitamins as well as the amino acids may be limiting factors in a feed used for protein supplementation. Not only are adequate amounts of the essential amino acids necessary, but sufficient amounts of essential vitamins must be supplied, if satisfactory growth, health, and reproduction are to be obtained. When corn and soybean meal rations are fed to chickens, excellent biological results are obtained, if adequate vitamins and minerals are included. The protein feeds of animal origin contained certain vitamins not adequately supplied by corn and soybean oil meal and hence the animal products were interpreted as supplying better protein.

The availability of synthetic vitamins has made it possible to add specific vitamins in known amounts. In some of our work here at Purdue, experiments have shown that excellent results in chick growth may be obtained when corn and soybean meal constitute about 95 percent of the ration, provided certain vitamins and mineral supplements are included. Table 1 shows the results obtained in our laboratory with a simplified chick ration when certain vitamins are included and omitted.

It will be noted that the weights of the chicks fed the simplified ration with 4 vitamins (Lot 1) compared favorably with those fed the positive control ration (Lot 7), which had the following percentage composition: ground yellow corn 56, soybean meal 22, meat and bone scraps 3, alfalfa leaf meal 5, liver meal 4, dried whey 3, distillers' dried solubles 5, bone meal 0.5, ground limestone 1, salt and manganese mixture 0.5 and irradiated animal sterols to provide 100 D-units per 100 grams of feed.

The omission of riboflavin (Lot 2) gave a marked decrease in growth, while leaving out either pantothenic acid (Lot 3) or niacin (Lot 4) or choline (Lot 5) gave a relatively smaller decrease in growth. In Lot 6 when methionine (an amino acid) was added the growth was slightly better than when the vitamin choline was added (Lot 1). Methionine and choline can replace to some extent each other in a corn and soybean meal ration, but the response in growth to either of these compounds varies with different samples of corn and soybean meal. Sometimes growth response is about the same, but usually methionine is more effective in this type of ration than choline.

Some samples of soybean meal need both choline and methionine to give the maximum growth increase, while other samples benefit very little from either choline or methionine. Processing is probably the chief factor determining the biological value of soybean meal, although variety and growing conditions may be factors also.

Table 2 shows the effect of toasting

TABLE 1. — EFFECT OF VITAMIN ADDITIONS TO A CORN AND SOYBEAN MEAL RATION UPON CHICK GROWTH

Ingredients (percent)	Lot Number 1	2	3	4	5	6	7
Ground yellow corn	57.7	57.7	57.7	57.7	58.0	57.7	
Soybean oil meal	38.	38.	38.	38.	38.	38.	
Riboflavin	+		+	+	+	+	
Calcium pantothenate	+	+		+	+	+	
Niacin	+	+	+		+	+	
Choline chloride	0.3	0.3	0.3	0.3			
DL-methionine						0.3	
Steamed bone meal	2.	2.	2.	2.	2.	2.	
Ground limestone	1.	1.	1.	1.	1.	1.	
Salt and manganese†	0.5	0.5	0.5	0.5	0.5	0.5	
3000-A, 400-D oil	0.5	0.5	0.5	0.5	0.5	0.5	Positive Control Ration (see below)
Av. Wt. 6 Wks. (grams)*							
Males	601	314	573	560	542	605	565
Females	506	313	498	477	485	525	513
Both sexes	554	314	536	519	514	565	539

† 9 parts of iodized salt, 1 part manganese sulphate.
* 454 grams equals approximately 1 pound.

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TABLE 2. — EFFECT OF TOASTING UPON THE GROWTH-PROMOTING VALUE OF SOYBEAN MEAL

Ingredients (percent)	Lot Number 8	9	10	11	12
Ground yellow corn	66	56	56	66	56
Toasted soybean meal	30	30	40		30
Untoasted soybean meal		10		30	
Raw soybean meal					10
Av. wt. 6 wks. (grams)	366	326	359	274	274

solvent extraction meal. The toasted and untoasted meals were from the same run of beans.

The data in Table 2 are for female chicks only, since in previous experiments males grew about the same on the untoasted and toasted meals. The minerals added to the rations were the same as in Table 1. The vitamins added were the same also, except that choline was omitted; hence the slower growth in all lots.

It is apparent that the addition of 10 percent of untoasted meal to 30 percent of toasted meal (Lot 9) depressed growth compared with Lot 8. That this was not due to an excess of soybean meal itself is shown from the results obtained in Lot 10. Comparing Lots 8 and 11 (toasted and untoasted meal at the same level), it is evident that a marked difference in growth-promoting value exists between toasted and untoasted meals.

The "untoasted meal" actually received some heat in the processing when the solvent was evaporated. In Lot 12, a raw meal was used (not the same sample of beans) which was from a plant in which a non-inflammable solvent was used, so that the solvent was removed by exposure to air and the meal therefore received no heat treatment at all. It is of interest to note that 10 percent of this raw meal with 30 percent of toasted meal (Lot 12) decreased the growth rate the same as 30 percent of untoasted meal alone (Lot 11). Evidently improperly heated meal may adversely affect the value of such toasted meal as is used in the ration. This deleterious factor is apparently destroyed by suitable heat treatment and has been called the anti-trypsin enzyme factor.

Only Protein

These data thus far presented have shown that it is possible to obtain excellent growth when properly processed soybean meal and corn are the sole sources of protein, and without benefit of animal protein. These results are only a sample from numerous examples of data obtained in our laboratory with corn and soybean meal rations.

In addition to choline and methionine, other compounds have been found to give similar supplementary value, such as betaine (found in beets) and lecithin (a phospholipid found in soybeans). Their value is said to be due to a labile methyl group (CH_3).

However, there are other products which will give the same supplementary value in a corn and soybean meal ration. One of these is condensed fish solubles, a relatively new product. When 2 to 3 percent is included in a corn and soybean meal ration and no choline or methionine are added, excellent growth is obtained, although the solubles supply only a fraction of the methionine of choline necessary for good growth. Similar nutritional values have been obtained from distillers' dried solubles, which cannot be accounted for on the basis of its choline and methionine content.

We have grown excellent chickens in confinement after 8 weeks on corn and soybean rations supplemented only with riboflavin, minerals, and A and D oil. These chickens started laying and laid as well on this ration during the first year as those on the control ration. However, high hatchability was not obtained until 5 percent of meat and bone scraps was added. In other experiments excellent chickens have been grown to maturity on nothing but corn, soybean meal and minerals, when good pasturage was available. Excellent egg production and hatchability have been obtained from this simple ration supplemented with good pasturage.

Thus it is evident that soybean oil meal is deficient in an unknown factor required for high hatchability. Experiments at the Ohio Station have shown that small amounts of fish meal, meat and bone scraps, and fish solubles will supplement a soybean meal and grain ration when fowls are confined. At the Purdue Station we have found that good pasturage will also supply the hatchability factor not adequately supplied by soybean meal and grain rations.

Soybean meal is deficient in certain minerals, but these are not difficult to supply. Apparently bone meal, limestone, iodized salt, and manganese sulphate are sufficient, as judged by the results obtained during the growing period and the first laying year.

Thus it appears that soybean meal may be used liberally as a protein supplement during the starting, growing, and laying periods. Soybean meal and grains are usually deficient in certain known vitamins (riboflavin, pantothenic acid, niacin, and cho-

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line), so far as the young chick is concerned, the one or more unknown hatchability factors, and certain minerals.

These deficiencies may be easily corrected by the use of fermentation residues, small amounts of meat or fish products, and a few simple minerals, or by good pasturage and minerals. The inferior results obtained at times from soybean oil meal have not been due to its protein quality, but to its vitamin and mineral deficiencies. Properly processed soybean oil meal will continue to be used as the principal protein supplement to our grains so long as it is available at a competitive price.

—s b d—

IOWA ELEVATOR

—Photo courtesy Corn States Hybrid Service

New 250,000-bushel concrete elevator built last summer by Farmers Cooperative Elevator at Randall, Iowa. The head house rises 120 feet above the ground. Included in project was a new 400-bushel-per-hour self-housed Campbell Dryer. Dryer is fed by a direct spout from a divided bin with dried grain returned to the lower half of the same bin by a Corn States single elevator leg. Walter Benson is manager of the Randall elevator.

RESEARCH AWARDS BY RALSTON PURINA CO.

Research awards for the 1950-51 school year will be given by Ralston-Purina Co., St. Louis, the firm has announced.

The fellowships, amounting to $1,440 annually, as in the past, are available to students qualified for graduate study in land-grant agricultural or veterinary colleges.

Purpose of the fellowships is to assist in the training of additional personnel for furthering the interests of agriculture, particularly the livestock and poultry industries.

Awards will be made in the fields of nutrition and physiology research as applied to dairy, poultry and animal husbandry; and research in transmissible diseases of livestock and poultry.

For further information write: J. D. Sykes, Ralston-Purina research awards committee, Ralston-Purina Co., St. Louis 2, Mo.

—s b d—

HUGHES

(Continued from page 13)

Third, to encourage farmers to come from a distance the Andersons pay a per-bushel mileage allowance of from 2 to 5 cents, depending on the distance the farmer has to haul to the elevator. But to get the mileage allowance he must become a patron of ATT. It will cost him $10 to become a patron for life. To date ATT has over 2,600 patrons who can collect the mileage allowance on their grain.

Another unique feature of the elevator is a proposed 500,000-bushel-capacity storage silo to be paid for by farmers themselves and operated by ATT. A farmer can buy any number of bushels of the storage he wants at the rate of 50 cents per bushel. The storage is his to be used as he wants. He pays to ATT a small monthly service charge for use of the handling facilities.

Is Tom Andersons' faith justified? Will we some day have elevators of this type throughout the Midwest? Many grain men say yes. Others say the terminal is a white elephant that will soon break down of its own weight.

But until that question is settled all eyes should be on Maumee.

—s b d—

Soybean straw that is plowed under will just about maintain the organic matter and the nitrogen content of the soil.

SALES MANAGER

Elbert Hargesheimer of Dayton, Ohio, is new assistant sales manager for the Arid-Aire Manufacturing Co., Minneapolis, Minn., manufacturers of the Arid-Aire Grain Dryer. He is well known in Van Wert County, Ohio, and his background includes management of a large grain and farm supply firm in Ohio. For the past few months he has been representing Arid-Aire in Illinois and Iowa.

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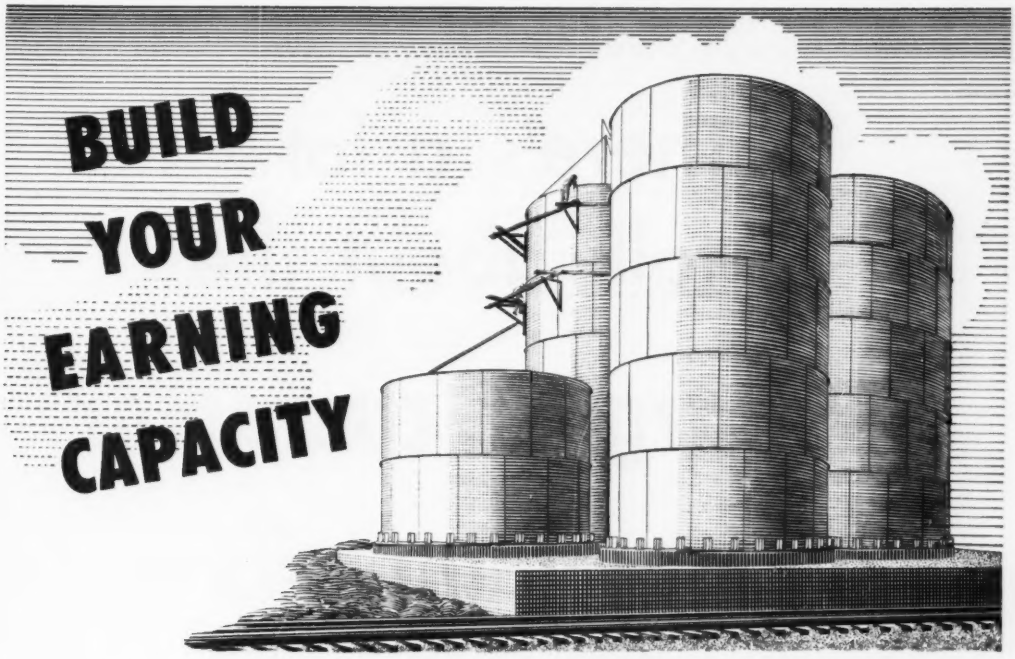

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And margarine has a constantly growing market. (This is **your** market, actually, if you produce or process soybean oils.)

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Brand advertising today is continuing this forceful campaign to put more margarine on still more tables — and keep it there.

Look for your good customer's advertising. Make sure your friends see it. And every opportunity you get, how about giving margarine a boost!

**Consumption 1948 and Industrial Surveys, Inc., data*

National Association of Margarine Manufacturers

Munsey Building Washington 4, D. C.

USDA: 1949 CROP 215 MILLION BU.

A production of 215 million bushels of soybeans is indicated as of Nov. 1, reports the U. S. Department of Agriculture. This is an increase of about 2 percent over a month ago, but is still 2 percent less than the 220-million-bushel crop of last year.

The season was exceptionally favorable for maturing and harvesting the crop. In many states the excellent fall weather resulted in better yields than were expected earlier. Most of the crop was combined in the Midwest with very small harvesting losses. The U. S. yield of 22.2 bushels per acre as indicated on Nov. 1 is the highest of record —almost a bushel above the high yield of last year and 3.5 bushels per acre above the 10-year average.

In the heavy producing North Central area yield prospects improved over a month ago due largely to increased yields in Ohio, Michigan, and Iowa. Ohio yields are now reported at 2 bushels per acre above a month ago, with indications of a record of 24 bushels per acre. In Iowa the drought did not cause as much damage as reported earlier. The November 1 yield of 22.5 bushels per acre is only a half bushel less than the large yield of last year. Indiana, Illinois, and Missouri showed no change from a month ago.

Improved yields were reported also in the North Atlantic, South Atlantic, and South Central areas. In the South Atlantic states, the two heavy producing states, Virginia and North Carolina, each reported a half bushel increase over a month ago. The season was very favorable in Virginia and a record yield is indicated. In the South Central area the crop is turning out better than expected especially in Arkansas, where the Nov. 1 yield of 19.5 bushels per acre equals the record set in 1948.

SOYBEANS FOR BEANS

State	Yield per acre		Production	
	Preliminary		Preliminary	
	1948	1949	1948	1949
	Bushels		Thousand Bushels	
Ohio	20.5	24.0	18,614	20,688
Ind.	21.5	22.5	31,196	30,038
Ill.	24.0	26.0	78,504	80,808
Mich.	17.5	21.0	1,138	1,260
Wis.	13.0	17.0	195	340
Minn.	18.5	17.0	15,614	12,393
Iowa	23.0	22.5	35,443	29,362
Mo.	20.0	21.0	15,900	16,695
Kans.	15.0	14.5	2,505	3,088
Va.	16.5	17.5	1,749	2,048
N. C.	13.5	13.5	3,564	3,618
Ky.	19.0	18.0	2,299	2,448
Tenn.	20.0	20.0	1,340	1,280
Miss.	18.0	15.5	2,394	1,798
Ark.	19.5	19.5	5,148	4,953
Other states	15.4	14.5	4,598	4,405
U. S.	21.4	22.2	220,201	215,222

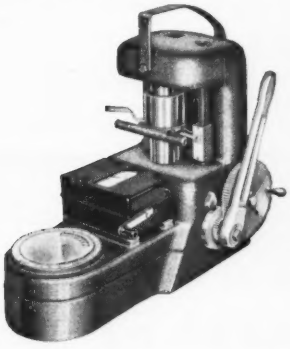
ITALY TO IMPORT U. S. SOYBEAN OIL

Refined soybean oil, because of its lower cost, is used in Italy as a substitute for less expensive grades of olive oil, reports University of Illinois Agricultural Economist L. J. Norton from Europe, where he went on a mission for the U. S. Department of Agriculture.

Substitution of soybean oil at its present price for olive oil is economically possible, says Norton. Imports of soybean oil from all sources in 1949-50 could reach 22,000-33,000 short tons, according to one man in the trade who also stated that American peanuts and peanut oil were priced too high. This would be the equivalent of 5 to 8 million bushels of whole soybeans.

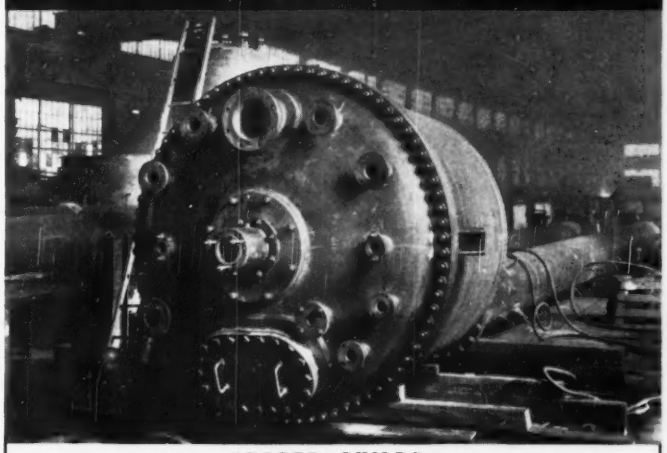
Soybean oil must be sold as a blended seed oil when it is sold at retail in Italy, according to Norton. It may be blended with third grade olive oil and corn oil but sesame oil must be added for identification.

NEW MOISTURE TESTER



Burrows Equipment Co., Evanston, Ill., is distributor for this new Universal Moisture Tester, manufactured by the Sheldrick Manufacturing Co., Upper Sandusky, Ohio. It operates on the principle of electrical conductivity. A generator supplies the current for testing, which eliminates test inaccuracies due to voltage fluctuations of the usual current supply.

PROCESS VESSELS



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W. J. MORSE RETIRES AFTER 42 YEARS

William J. Morse, known throughout the world, but particularly in the United States and the Far East, for his work in soybean development here, retired Nov. 30 after 42 years in the U. S. Department of Agriculture. A native of Lowville, N. Y., and a graduate of Cornell University, he went to the Department in 1907 just at the time the Bureau of Plant Industry was making plans to carry on research in the growing of this crop.

The plant, introduced from time to time from China, Manchuria, Korea, Japan, and other parts of Asia, had been known here for a century, but had increased to only a few thousand bushels a year. Now, after the long period of search and research, it is highly productive, with varieties suitable for various areas, is grown to the extent of 200 million bushels a year, and is listed on the grain exchanges. Most of the great increase has come in the past 20 years, much since the beginning of the production stimulus of World War II.

—Photo courtesy Missouri Ruralist

Morse (right) and ASA director H. I. Cohn.

Twenty years ago, after having put in 22 years of research in the Department, Mr. Morse spent 2 years exploring for soybeans and other crop plants, and looking for lore and farming practices, in China, Japan, Korea, and Manchuria. He returned with hundreds of varieties, many of which contributed to the improvement of the strains already here.

By his development work he supplied the country with varieties suitable for various localities, increased the oil content of some—a big factor in the industrial use of this crop, and made other varieties better for food use. He stimulated the development of the vegetable soybean in this country. The soybean had been little more than a curiosity until research in the Department, largely by Mr. Morse, led the way to making it the important food, feed and industrial crop of today.

In 1947 the Department gave Mr. Morse a Superior Service Award and the same year the American Soybean Association, of which he was three times president, gave him an honorary life membership. Mr. Morse has published more than 75 bulletins and articles on soybeans and is co-author of The Soybean, published in 1923 and still the standard work on the subject, often referred to as "the soybean bible." On his retirement he plans to finish a book on soybean foods.

The records of the Department provide many statements of his superiors indicating good reasons for the success of his work: "A most able man, highly efficient and productive—painstaking and industrious" . . . "brought about the use of the soybean as human food in this country" . . . "has marked ability in obtaining enthusiastic and harmonious cooperation."

WILLIAM J. MORSE

Mr. Morse and his wife live at 6809 Fifth St., N.W., Takoma Park (Washington) D.C.

—s b d—

HEADS IOWA PROCESSORS

Charles W. Hanson, Big 4 Cooperative Processing Association, Sheldon, Iowa, was elected chairman of the Iowa Soybean Processors at the association's annual meeting in Des Moines, Nov. 20. He succeeds H. E. Marxhausen, Cargill, Inc., Fort Dodge, Iowa.

M. C. Larson, Muscatine Processing Corp., Muscatine, Iowa, was elected secretary-treasurer, succeeding Henry B. Lovig, Farmers Cooperative Elevator, Martelle, Iowa.

The meeting was held in conjunction with the Western Grain and Feed Dealers annual convention.

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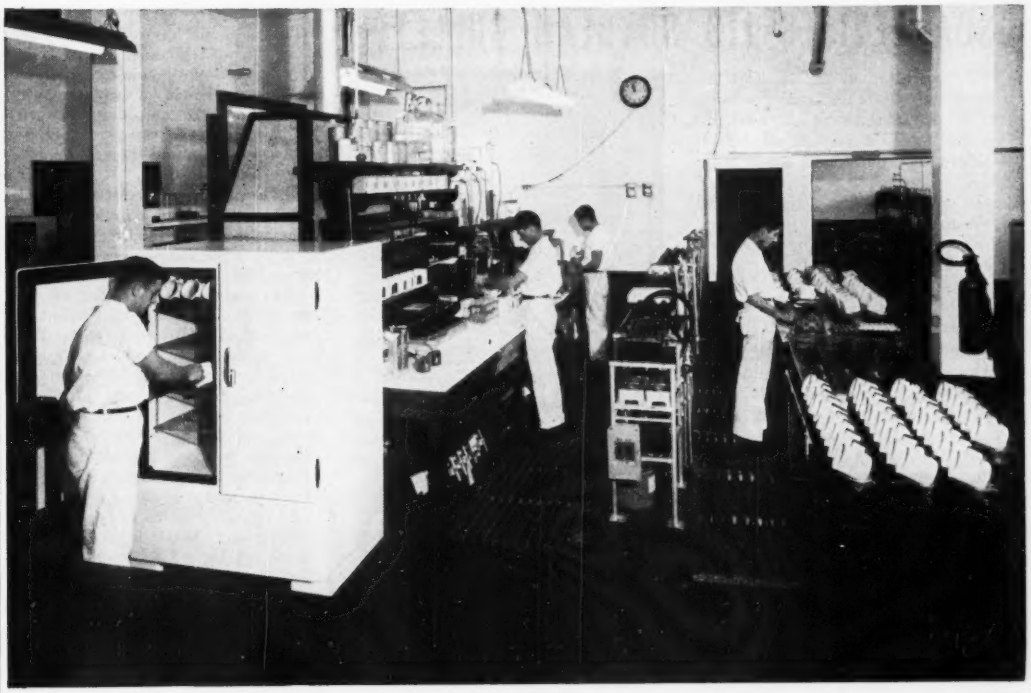

The Oil Refining Department at Woodson-Tenent Laboratories, Memphis, Tenn., has a capacity of 150 refinings a day. The special refrigerator is for cooling oils.

Official Chemists National Soybean Processors Assn.

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Publications

USDA REVISES ITS SOYBEAN BULLETIN

In recognition of the soybean as a crop of substance and position, the U. S. Department of Agriculture has issued a revised edition of its farmers' bulletin called Soybeans: Culture and Varieties. First issued more than 20 years ago, the publication now brings up to date information on the many varieties and practices developed during the time the acreage was going up nearly eightfold and seed production fortyfold. All principal varieties are described and classified.

This one-time "sacred" grain of the Chinese, considered their most important legume, was first mentioned in a book on medicinal plants nearly 3,000 years B.C. by Emperor Sheng Nung, "the heavenly farmer." It is now described by W. J. Morse, senior author of the bulletin, as occupying a "highly important place in American farm systems for forage, feeds, and soil-improving purposes and as a source of raw material in the manufacture of numerous feed, food, and industrial products."

The authors, in addition to Morse, who is principal agronomist of the Bureau of Plant Industry, Soils, and Agricultural Engineering, are J. L. Cartter and L. F. Williams, agronomists of the same bureau who carry on research at the U. S. Regional Soybean Research Laboratory, Urbana, Ill., in cooperation with state agricultural experiment stations in the Cornbelt and the Southeast.

CO-AUTHOR L. F. WILLIAMS

The bulletin (F 1520) may be obtained free from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C., or from members of Congress.

Oilseed Markets

The loss of prewar sources of oilseeds and vegetable oils and the need for husbanding dollar resources has caused many European countries to increase their domestic production of oilseeds and to look to Africa for more of these commodities.

Since European markets are important outlets for soybeans and other oilseeds produced by U. S. farmers, a survey was made in the latter part of 1948 by Howard A. Akers, marketing specialist of the fats and oils branch, Production and Marketing Administration. Purpose of the survey, which was conducted for the Office of Foreign Agricultural Relations, was to obtain firsthand information on developments in some of the European countries and in Africa to aid in appraising foreign outlets for U. S. products.

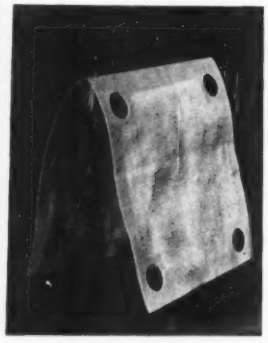
A report has now been issued summarizing Akers' observations. It covers the United Kingdom, France, the Netherlands, Belgium and Denmark as well as African countries and colonies.

OBSERVATIONS ON THE VEGETABLE OILS SITUATION IN CERTAIN COUNTRIES OF EUROPE AND IN SOURCE AREAS OF AFRICA, by Howard A. Akers, marketing specialist. Foreign Agriculture Report No. 40, Oct. 1949. Office of Foreign Agricultural Relations, U. S. Department of Agriculture, Washington 25, D. C.

Meal and Carotene

The carotene concentration in the blood plasma of lactating cows is reduced when the cows are fed 9 pounds of ground, raw soybeans daily, trials have shown. But when only the oil portion of the beans was used, the reduction in the carotene concentration in the blood plasma was somewhat less than when the whole bean was fed. Because of this difference it was reasoned that soybean oil meal probably carried some factor or factors affecting the blood plasma carotene.

A trial has been undertaken at Iowa State College to learn whether soybean oil meal when fed to dairy cows would cause their blood plasma carotene to fall as was the case when soybeans or soybean oil was



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fed. Also, the experiment was to recheck the effects of cracked raw soybeans on the carotene in the blood plasma of lactating cows.

As in the previous test, a reduction of the carotene concentration of the blood plasma and of the milk of lactating cows resulted when raw soybeans were fed.

But when soybean oil meal was fed in an amount equal to that of the raw beans minus their oil content, the carotene concentrations in the blood plasma and the milk fat were similar to those when the cows were fed the control ration.

Both the control and the soybean oil meal groups excreted more carotene in their milk than did the group fed raw soybeans.

Loss of these nutrients from the bodies of the cows fed raw soybeans thus was not the cause of the observed reduction of their blood plasma carotene concentration. Apparently soybeans either interfered with carotene absorption or caused some destruction of it.

EFFECT OF RAW SOYBEANS AND SOYBEAN OIL MEAL ON THE VITAMIN A AND CAROTENE CONCENTRATIONS IN THE BLOOD PLASMA AND MILK OF LACTATING COWS. By R. L. Squibb, C. Y. Cannon and R. S. Allen, Iowa State College, Ames. Journal of Dairy Science, June 1949.

SBOM and B_{12}

Amino acids and vitamin B_{12} have been investigated as supplements to commercial cottonseed meal low in gossypol and to soybean oil meal for growing chicks. The protein concentrates were added in quantities to supply a total of 20 percent protein in the diet.

One typical diet contained corn meal, protein concentrate, steamed bone meal, manganese sulfate and all vitamins required by growing chicks. The experimental period was 4 weeks. Another contained cerelose instead of grain and mineral mixtures instead of bone meal.

Two groups of 17 chicks each receiving the cerelose soybean oil meal diet weighed an average of 250 grams without and 285 grams with vitamin B_{12}.

AMINO ACIDS AND VITAMIN B_{12} AS SUPPLEMENTS TO PLANT PROTEINS FOR GROWING CHICKS. By L. R. Richardson, L. G. Blaylock, H. L. German and R. M. Sherwood. Texas Agricultural Experiment Station, College Station, Texas.

Oil Meal and Fertility

The fertility and semen production of 18 bulls fed concentrate mixtures containing corn gluten feed, skimmilk powder or soybean oil meal as protein supplements with timothy hay revealed that animal protein was not superior to plant protein.

The authors report the economy of the plant protein used was much greater than the animal protein.

Journal of Dairy Science, Apr. 1949.

Soybean Ascorbicase

During the course of studies in India on vitamin C in soybeans and soy milk it was observed that the bean possesses a powerful ascorbicase activity which is dormant in the dry seed but develops quickly on germination.

Recent studies relate to the isolation, properties and chemical nature of soybean ascorbicase.

In germinating soybeans the ascorbicase activity is developed practically to a maximum after 48 hours. After that period, it remains more or less stationary in the cotyledons but decreases in the sprouts. There is higher production of the enzyme during germination in the white than with the black variety of the beans.

SOYA-BEAN ASCORBICASE. By Y. B. Rangnekar, S. S. De and V. Subrahmanyan, department of biochemistry, Indian Institute of Science, Bangalore. Indian Journal of Medical Research. Oct. 1948.

Lecithin in Soaps

Vegetable lecithin is usually extracted from soybean oil and retains about 40 percent of the oil. On milling 5 percent of lecithin into soap, 2 percent of unsaponified soybean oil is also introduced automatically. Steps have been taken to eliminate the oil content and to replace it by stable fatty substances. The substitution of the latter is necessary because pure lecithin does not keep well and is difficult to work.

Soaps with which lecithin preparations were incorporated by milling were characterized by special properties. The soap mass remained firm; an unduly brittle soap became supple; the lather was creamier; durability was unaffected or

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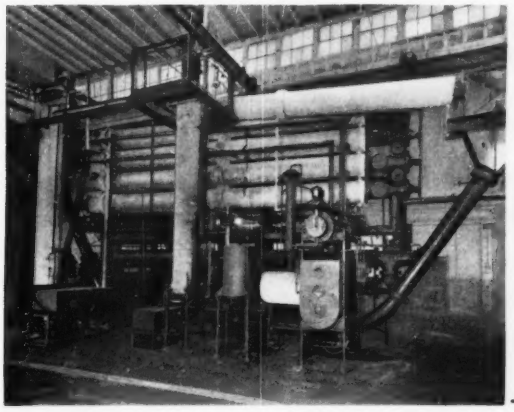

● Here is a small (twenty-five ton), efficient extraction system especially developed for use in smaller operations. This plant, thoroughly tested and proved, uses non-flammable Trichlorethylene solvent and is manufactured under exclusive patent rights of Iowa State College. Operating data on this system, including figures on consumption and yield, will be provided on request.

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improved. Cakes or bars remained unchanged even after 10 years, during which the perfume was unimpaired. They had a pleasant action on the skin, especially when lecithin-lanolin was present. A soap base of particular suitability was prepared from 85 percent tallow, 12 percent coconut oil, and 3 percent castor oil, by saponification with caustic soda.

Lecithin cannot be used in soaps for which a perfectly white color is desired, since slight yellowing occurs with additions of only 0.5-2 percent, while a yellow to brown color is imparted by 5-10 percent concentrations of lecithin. Additions of up to 5 percent strengthen the lather.

Manufacturing Chemist 20, 402-3, 1949.

Manufacture of Cortisone

The further development of cortical hormone research will benfit notably the chemical sciences. The availability of these compounds to the clinician will further the present-day studies into the nature and origin of chronic crippling diseases such as arthritis and rheumatic fever.

Both industry and government are engaged in a feverish struggle to manufacture at all costs a specific cortical hormone.

The work is described in SYNTHESIS OF COMPOUND E (CORTISONE). By C. R. Addinall, Ph. D., director technical information department Merck & Co., Inc., Rahway, N. J. The Merck Report, Oct. 1949.

ASA Films

Our readers are reminded that three educational films are available through the American Soybean Association, Hudson, Iowa. They may be shown in the same program without serious duplication. Titles and description of the films follow.

THE SOYBEAN STORY. Produced by Allis-Chalmers Co., with the cooperation of J. C. Hackleman, extension agronomist, University of Illinois. This is a 25-minute, 16-mm. sound and color film that tells the story of soybean production, harvesting and usage with special emphasis on the commercial possibilities of the crop.

BEANS OF BOUNTY. Produced by Victory Mills, Ltd., Toronto, a 20-minute sound and color film. The camera focuses on farms in Ontario where the value of feeds containing soy products is illustrated and on research underway at the Agricultural College and the experiment station to develop suitable soybean varieties.

PROGRESS IN PRODUCTS. Produced by the American Soybean Association and the National Cotton Council of America, a 25-minute 16-mm. sound film. The film portrays production methods of modern industry and their effects on world civilization. It also portrays the story of the manufacture of margarine and the part agriculture plays in industry and the way in which a new industry helps other industries by broadening markets and creating new ones.

The Swimming Is NOT Good

—Photo Courtesy Blytheville Jaycees

Mary Ellen Stafford, who was Miss Blytheville, Ark., of 1949, demonstrates that the moisture content of these Mississippi County (Ark.) soybeans is far too low for swimming.

S-100 Variety

THE S-100 SOYBEAN. Bulletin 521, by C. V. Feaster, Agricultural Experiment Station, Columbia, Mo.

—s b d—

Soybean oil meal is sometimes substituted for jack bean meal in making Amion tooth paste.

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GRITS and FLAKES... FROM THE WORLD OF SOY

Archer-Daniels-Midland Co's. new soybean oil refinery at Decatur, Ill., was ready to go into production Oct. 30. The refinery will use raw oil from the company's new solvent plant at Decatur which went into production last summer. Plans have been announced for a new pilot plant in Minneapolis.

* * * *

Ellis D. English has been elected president of the Commander-Larabee Milling Co., an affiliate of Archer-Daniels-Midland Co., Minneapolis, Minn. English replaces Clarence M. Hardenbergh who was named chairman of the board.

* * * *

Chemical plants division of Blaw-Knox Co., Pittsburgh, Pa., has received a contract from Catalin Corp. of America for the design and construction of a liquid resin plant at Calumet City, Ill. The plant will produce liquid phenolic resins for use in waterproof adhesives and binders.

* * * *

Tontogany Farmers Association, Tontogany, Ohio, has completed a new concrete elevator.

* * * *

Earl F. Riter has been appointed administrative assistant to Ralph G. Golseth, vice president in charge of the Chicago district, soya products division, Glidden Co., Cleveland, Ohio.

* * * *

Warren N. Burding has been named president of the John F. Jelke Co. of Chicago. He succeeds J. M. Elliott and comes from Standard Brands, Inc., where he served as vice president of the grocery division for 5 years.

* * * *

K. S. Adams, president of Phillips Petroleum Co. and Phillips Chemical Co., has announced the appointment of Robert B. Prock as manager of the Los Angeles district of the firm's fertilizer sales division.

* * * *

Durkee Famous Foods, Cleveland, Ohio, has announced a $26,000 contest to introduce its new Durkee's own Grade AA margarine to the nation, and find a name for it.

* * * *

The opening of a branch office in Stockholm, Sweden, of the New York consulting engineering firm of R. S. Aries & Associates was announced recently by Robert S. Aries, president of the organization.

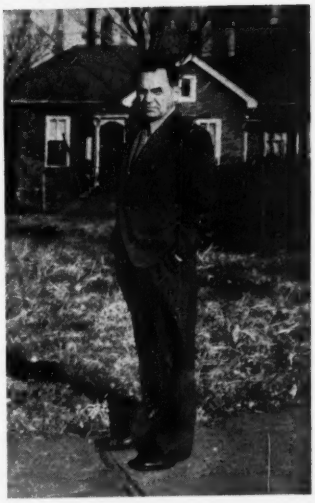
* * * *

Mansfield & Green, Cleveland, Ohio, announces nine types of diaphragm seals for use with any make pressure instrument used in the process industry. The line is intended to lengthen use of instruments subject to corrosion or clogging.

* * * *

Plant of Dannen Mills, Inc., St. Joseph, Mo., processor, was hit by a tornado Nov. 11. Two warehouses and a locker room were destroyed. Damage was estimated at $30,000, according to Dwight L. Dannen, vice president.

IOWA PIONEER



Joe Sinaiko, president and founder of Iowa Milling Co. at Cedar Rapids. You can see bottom of storage bins, which house 300,000 bushels of soybeans, in the background. Sinaiko and Max Alberts pioneered Iowa soybean processing when they went from Wisconsin to Cedar Rapids to install two screw presses on the present site in the fall of 1927. Alberts later established the Galesburg (Ill.) Soy Products Co. and Sinaiko has engaged in a number of Midwest processing operations. Sinaiko added two screw presses to Iowa Milling Co. equipment last summer to bring the total to 10 and daily processing capacity to 200 tons.

— s b d —

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Ernest W. Gallup, who has been affiliated with the Norris Grain Co., Chicago, Ill., since 1913 as traffic manager, office manager and general elevator superintendent, retired from the firm recently.

* * * *

Soybean processors of five states held a regional dinner meeting in Des Moines, Iowa, Sunday evening, Nov. 20, with 45 in attendance. The states of Minnesota, Nebraska, Kansas and Missouri were represented in addition to Iowa. R. G. Houghtlin, president of the National Soybean Processors Association, presided. Meeting was held in conjunction with Western Grain and Feed Dealers annual convention.

* * * *

Everette B. Harris, secretary of the Chicago Board of Trade, spoke on the functions of a speculator and the benefits of hedging in the futures markets before the 50th annual convention of the Western Grain and Feed Association in Des Moines, Iowa, on Nov. 21.

* * * *

The 13 soybean storage tanks and 3 seed houses of the Swift & Co., Oil Mill, Cairo, Ill., were painted recently with aluminum paint.

* * * *

Decatur Soy Products Co., Decatur, Ill., is constructing a new processing building to replace the old one. These changes will increase the daily capacity from 3,800-bushels to 6,500. The figures were incorrectly stated in the September issue.

* * * *

Farmers Cooperative Elevator Co., Buffalo Center, Iowa, completed a 45,000-bushel addition to its elevator in time for storing that area's bumper soybean crop. The bin was filled to capacity in 3½ days.

* * * *

Central Iowa Bean Mill, Gladbrook, Iowa, is building six concrete grain storage bins. Four bins for soybean storage will have a capacity of 38,000 bushels each. The new structures will increase the mill's total capacity to 350,000 bushels.

* * * *

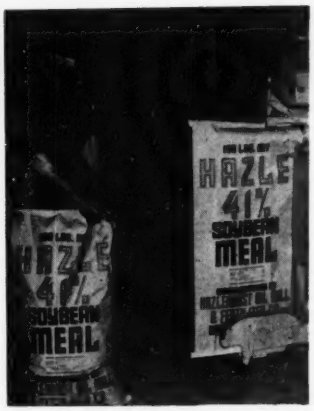
Stockholders of Detrex Corp., Detroit, Mich., have elected Robert Lindley Murray a director of the corporation.

* * * *

Bemis Bro. Bag Co., St. Louis, Mo., has developed a polyethylene-lined laminated textile bag which combines the advantages of plastic film with the strength and handling advantages of cotton or burlap laminated textile bags, the firm says.

* * * *

Organization of the Wilson Electric & Supply Co., Wilson Ark., has been announced by S. A. Regenold, general manager. The firm will have charge of all the purchases for the Wilson Soya Corp. and Delta Products Co. oil mill.



One operator can fill three 100-pound multiwall paper valve bags of soybean meal a minute using this St. Regis 100-LS automatic packer. While bag on machine receives its charge operator tucks in sleeve on filled bag to complete the closure.

valve bags for cottonseed meal that it now is packaging soybean oil meal in a similar paper container.

Hazelhurst, a unit of the Mississippi Cottonseed Products Co., Jackson, Mississippi, a large chain in this important southern meal industry, has employed the automatic packaging system of St. Regis Paper Co., to pack its cottonseed and soybean meals output.

Hazelhurst made its first shipment of cottonseed meal in multiwall paper bags in January, and recently expressed intentions of going 100 percent into paper. Packaging of soybean meal in paper bags has been in operation at Hazelhurst at an increased rate.

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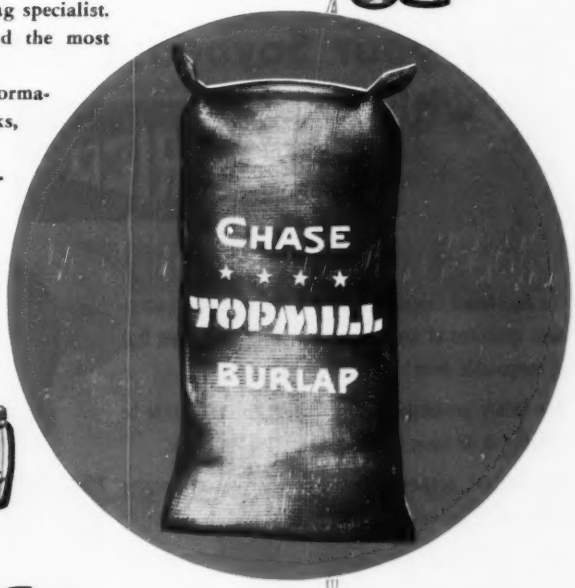
Chase Specialties: Mailing Bags, Spiral Tubing, Twines

Your Chase Salesman is a thoroughly trained bag specialist. He knows materials, design, construction, and the most modern packaging techniques.

And, he also knows how to best apply this information to your business . . . in terms of good looks, efficiency, and economy!

He is supported by a company with plants strategically located throughout America—to serve you quicker, better. His recommendations are backed by a reserve of experience that dates back to 1847.

Write today—he'll be glad to help provide a better container for your products.



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OKLAHOMA CITY • PORTLAND, ORE. • REIDSVILLE, N. C. • HARLINGEN, TEXAS • CHAGRIN FALLS, O. • HUTCHINSON, KAN. • CROSSETT, ARK.

Richard F. Uhlmann, president of the Chicago Board of Trade has announced that the board of directors has elected to membership in the Board of Trade, George J. Halpin with Norris Grain Co., Chicago.

* * * *

E. H. Tenent, Woodson-Tenent Laboratories, Memphis, Tenn., recently served as consultant for the crude soybean oil committee of the Chicago Board of Trade on the proposed trading rules for crude soybean oil futures which expects to open in the near future.

* * * *

Detrex Corporation, Detroit, Mich., has installed an oil-extraction plant at LasLlaves, Puerto Cabello, Venezuela, which will be in operation within a few weeks. Capacity is rated at 50 tons of copra or 75 tons of soybeans per day.

* * * *

Hagen Elevator, New Berlin, Ill., was destroyed by fire this fall with damage estimated at $50,000.

* * * *

The story of Archer-Daniels-Midland Co.'s achievements in the processing industry was carried in the November issue of Commercial West. This was one in a series of articles to portray the importance of Midwest industries as part of the nation's economy.

* * * *

Juluis Mayer, Continental Grain Co., and Wm. J. Walton of General Mills, Inc., have been nominated for directors in the Chicago Board of Trade.

* * * *

A company study of Archer-Daniels-Midland Co., appeared in a recent issue of Barron's National Business and Financial Weekly.

* * * *

Fred A. Wirt, advertising manager of J. I. Case Co., is among 200 Americans to receive an award from Freedoms Foundation at Valley Forge, Pa., recently in recognition of their contributions to the American way of life by "speaking up for freedom."

SOY CONFERENCE AT NORTHERN LABORATORY

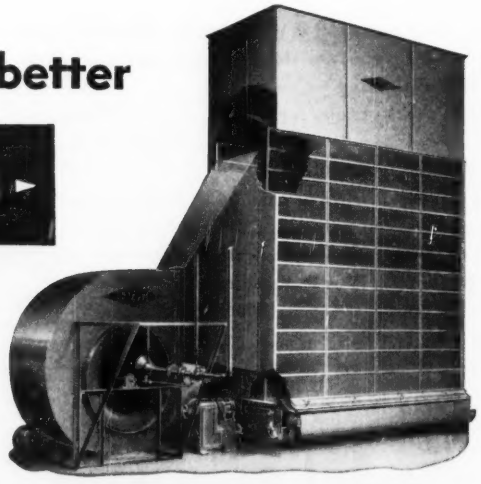
A soybean conference will be held at the Northern Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, Peoria, Ill., Jan. 16 and 17, Director R. T. Milner has announced. The meeting has been planned with emphasis on topics of interest to soybean processors.

The tentative program includes speakers from industry who will discuss soybeans in Europe, methods of soybean processing, the nutritive value of soybean oil meal, and the production and use of soy flour. Staff members of the Laboratory will report the results of their recent work on soybeans, and representatives of other agencies and laboratories of the Department of Agriculture will discuss new varieties of soybeans, hedging problems, and acreage allotments for oil crops.

Although room reservations should be made directly with the Jefferson Hotel, Peoria, Ill., Dr. R. T. Milner, director, Northern Regional Research Laboratory, Peoria 5, Ill., will appreciate receiving advance notice of your intention to attend the meeting.

Dry your Soybeans better with

BERICO



The **field-tested Columnar Grain Drier** that employs tremendous quantities of **low-temperature** air (2 to 3 times that of comparable driers).

The factory **pre-fabricated Grain Drier** that can easily be installed in 48 hours by average unskilled farm labor.

The **efficient, economical Grain Drier** having an amazing success story, written in the rice and grain fields of America.

The **versatile Grain Drier** that comes in models for small farm use; for installation in field without housing; or for use by largest Terminal elevators.

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announcing...

The little man with the big spoon has some good news for soybean growers everywhere. He's the Supersoy Chef who is now telling the world about Supersoy "S" and Supersoy "C", ADM's new soybean salad and cooking oils.

Supersoy oils are now in production at our new ultra-modern refinery at Decatur, Illinois. We think they are the finest quality salad and cooking oils ever offered. If industry agrees, Supersoy will help build the market for your soybean crops year after year.

Aggressive advertising and promotion of soybean products is an old tradition with ADM. In the case of Supersoy we plan to make the little man with the big spoon one of the best salesmen *you've* ever had.

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"Creating New Values from America's Harvests"

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World's Largest Marketer of HYDROCARBON SOLVENTS Offers Close-cut

Esso HEXANE

1	**Narrow Boiling Range**	(Typical 154-161°F.)—Assures complete removal from extracted oil and meal.
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6	**Readily Available**	Can be shipped immediately in tank cars from Baytown, Texas or Bayonne, New Jersey. Also available in tank wagons or transport trucks from Bayonne.
7	**Technical Assistance**	Our technical staff is always available for consultation. Why not write or call us today?

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WASHINGTON Digest

By PORTER M. HEDGE

Washington Correspondent for
The Soybean Digest

CONTROLS. The question of setting acreage allotments for soybeans grown in 1950 will be settled officially in about a month.

The decision won't be made until after the December, final, crop report, and until after allotments have been established for the 1950 corn crop.

Also figuring in the decision will be estimates of how well farmers will comply with cotton and corn acreage allotments, and how much acreage of corn and cotton might be diverted to soybeans next year.

In general, top USDA officials have been opposed to setting acreage allotments on any but the "basic" crops next year. This was the policy which ruled against flax allotments, and sent the price support from 90 to 60 percent of parity.

However, there will be strong backing for allotments within USDA. Talk of the possibility of allotments has bobbed up in Commodity Credit discussions. It's CCC which will have the final determination.

The soybean problem is considerably different than flax. For this reason, while 1950 soybean allotments are not sure, they cannot be ruled out entirely.

Cottonseed, flaxseed, and peanut production next year will be lower. In the case of cotton and peanuts, it will be due to acreage allotments. In the case of flax it will be due to a sharply lower price support.

Taking these cuts in acreage into account, it's estimated that a 1950 soybean crop of around 200 million bushels would reduce the supply of oilseed meal close to 1 million tons.

Livestock numbers were up this year, and will go a little higher in 1950. Even with big carbohydrate feed supplies, this is too much of a cut in protein meal supply in view of the livestock increase.

It's recognized by officials that soybean acreage next year will have to remain large, if for no other reason than to supply enough protein meal.

Suppose there are no curbs on soybean acreage at all. Officials fear that planted acreage might increase as much as 4 to 5 million acres, due to diversion from corn in the north and cotton in the Mississippi Delta counties.

An increase this size would be roughly 40 percent over 1949 plantings. Officials say in effect, "what would happen to soybean prices in 1950 if acreage increased as much as 4 to 5 million acres?"

This is what has been bothering them. It is being proposed that some kind of a balance be struck. That is, set a soybean acreage at some percentage over 1949, and use the allotment to control the expansion in soybeans next year, rather than to reduce the acreage.

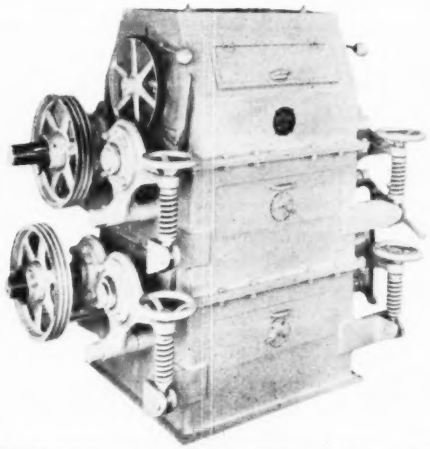
Should 1950 soybean allotments be established, the price support for soybeans would be put at 85 to 90 percent of parity. If there are no allotments, the 1950 support is pretty apt to be around 75 percent of parity.

It's pretty much guesswork to figure the outcome now, because officials themselves aren't sure. But if you were to guess, a fair one would be to count on a price support ranging from $2 to $2.10 a bushel, with allotments permitting a 1 to 1½ million acre increase in 1950 plantings.

MARGARINE. Action on the House-passed margarine tax repeal bill is slated in the Senate early in the session when Congress convenes next month.

However, Senate passage early in the session is by no means a cinch, despite an apparent majority in favor of repeal when the bill reaches the Senate floor.

Dairy interests, sparked by the National Milk Producers Association are putting on a campaign for a



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This quality Roller Mill is available in sizes 9 x 18 to 10 x 42.

Write for further information to

BARNARD & LEAS MFG. CO., INC., CEDAR RAPIDS, IOWA, USA

war chest to fight passage of the bill, with $500,000 as the goal.

Margarine interests have a war chest, too. But the officials of the National Association of Margarine Manufacturers say only about $90,000 was spent this year to promote passage of the bill.

GRAIN STORAGE. Commodity Credit officials think elevator storage for grains, including soybeans will be increased substantially by the new program to increase elevator construction.

Basic authority for the program is contained in the new farm act, although a plan somewhat similar had been drafted by CCC before the new legislation was passed.

Under the new program, CCC will guarantee occupancy of 75 percent of the capacity of new elevators for 3 years, or for 2 years if the new structure is merely an addition to an existing one.

There are, of course, some strings attached. The guarantee won't be given unless the elevator is located in an area where additional storage space is needed. The recommendations of county and state PMA committeemen as to need will be one of the main factors in obtaining the guarantee.

The new law authorizes the Bank for Cooperatives to lend co-ops up to 80 percent of the cost of building a new elevator, providing the CCC guarantee accompanies the application. The usual sources of credit—local banks or RFC—are available to private concerns.

Any outfit—co-op or private—is eligible for the CCC guarantee. Regular storage rates will be paid by CCC for any grain it places in the new elevators, up to 75 percent of capacity. The rate on the unused portion of the guaranteed space will be graduated—10 cents the first year, 9 cents the second, 3 cents the third.

—s b d—

STRAYER

(Continued from page 5)

the alcohol extraction process as a possible means of production of soy food proteins; determined efforts to guard against the marketing of undesirable soy products which might further depress the appreciation of soy products in the German economy; the organization of research work on breeding of soybean varieties and production on a commercial basis to give better information on production possibilities; and the provision of certain technical publications and supplies to picked research leaders so they may become acquainted with developments outside Germany.

Countries visited on the ECA project in addition to Germany include France, Switzerland, Belgium, Holland, Denmark, Sweden, England. Time was spent in Holland and Sweden studying the soybean breeding work being done in those countries. Approximately 4 weeks were spent in traveling over Germany by automobile, visiting growers, experiment stations, foods plants, oilseed plants, governmental officials and others. The crop was maturing as we progressed in our travels, thus we were enabled to see the actual maturity of the crop as compared with the soybean belt of the U. S.

We were extremely fortunate in having as our traveling companion and interpreter Dr. Wm. Bening, secretary of the German Soya Association with headquarters in Frankfurt/ Main. Through his wide acquaintanceship and knowledge of the German soya industry, as well as his knowledge of Germany, we were enabled to make many contacts and visit many plants and stations we would otherwise have missed.

Success or failure of the project, of course, is dependent upon the extent of usage made by the German Foods Ministry officials. It gave Mr. Cartter and myself an insight into European agriculture and the place of American soybeans in it that would have been impossible through any other means. It will enable us to be helpful to the Germans and to the soya industry in this country through coming years.

Market Street

We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate: 5c per word per issue.
Minimum insertion $1.00.

FOR SALE—Anderson Expellers, French Screw Presses all models, as is or rebuilt for specific materials. Pittock & Associates, Moylan, Penna.

FOR SALE—Scales, 18" x 25" platform, 1200# capacity, $49.00. 31" x 42" platform, 2000# capacity, $98.00. Truck scales, 15 ton, $450.00; 20 ton, $510.00. Conveyors, bag and box pilers, floor to floor conveyors. Write for information. BONDED SCALE & MACHINE COMPANY, 136 Bellview, Columbus 7, Ohio.

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We maintain a staff of Research Engineers who will gladly analyze your problem and report to you their recommendations for the most efficient and economical methods of extraction. Just send us the details of your production job.

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Roll Grinding and Corrugating . . .
the soybean industry relies on this ESSMUELLER service, too, since we maintain two of the largest plants in the country and can tackle any job regardless of size or finish.

Elevators . . .
of specialized or standard units in regular or special steel construction.

Conveyors . . .
either portable or fixed, with standard screw or a special design in regular or stainless steels.

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In The MARKETS

LATE NOVEMBER MARKETS FIRM

After dragging declining markets the first half of November, all markets recovered and pushed to higher ground during the fourth week.

Factors making for easy markets the fore part of November were abnormally warm and open weather with much livestock still in pastures, with resulting poor feedstuffs demand, the U. S. Department of Agriculture November report boosting its crops estimates and the outlook for a record U. S. output of fats and oils in 1949-50.

With heavy hog runs, lard declined to the lowest point since Jan. 1941 early in November.

With full production of soybean oil meal, offerings were heavier than demand and there was some distressed meal on the market.

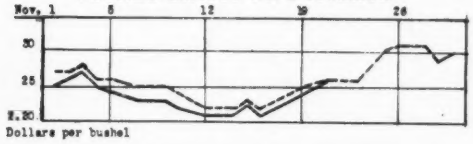
After midmonth the government stepped into the picture to reverse the trend in the soybean oil market. Commodity Credit Corporation bought 100 to 200 tankcars of soybean oil for November-January shipment, and it was stated would buy 500 more. Economic Cooperation Administration authorized 4.1 million dollars for purchase of soybean oil to be sent to Germany for March and April delivery. The fact that the government was buying cottonseed at the support price also had a strengthening effect on vegetable oils markets.

Foreign buyers considered soybean oil a bargain at the going price and there were prospects that a good volume might go abroad. During the week of Nov. 26 100 tankcars of refined oil were sold to Spain, and 1,500 tons of crude soybean oil were sold to a Holland firm.

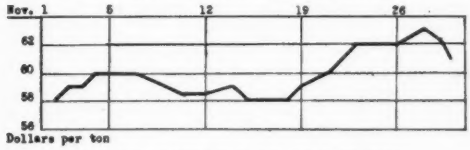
The volume of trading in soybean oil was fair with refiners, industrial users and mills all in the market. But it was pointed out that the total amount moving was small for this time of year.

Colder weather also brought strength to feedstuffs markets. Excess offerings of oil meal and soybeans

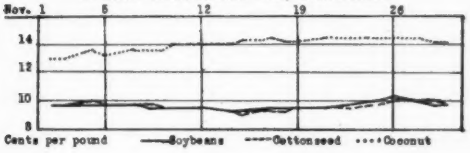
FUTURES CHICAGO NO. 2 SOYBEANS



BULK SOYBEAN OIL MEAL, DECATUR



CRUDE VEGETABLE OIL, TANKCARS



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Processed and reconditioned in the foremost modern plant in the Mid-West. Each bag is vacuum cleaned, sorted, graded, mended and inspected before baling ready for shipment.

We have the type and size of bag that you want and can supply you immediately.

Bag printing in colors. Your own label or we submit sketches and ideas.

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Filpaco FILTER PAPERS

For filtering the crude soybean oil; for use with activated carbon and fuller's earth in the bleaching step; and for the final polishing and clarification.

These filter papers are made from the finest materials available under rigid specifications for accuracy and dependability.

Samples furnished upon request for experimental purposes. WRITE FOR FURTHER DETAILS TODAY.

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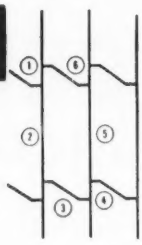
7 STAVES INTERLOCK



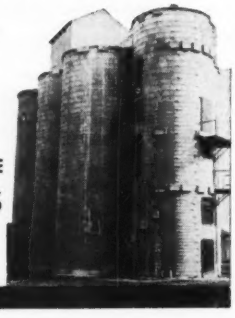
Each Super-Concrete Stave in a Neff & Fry Silo interlocks with six contiguous ones. The edges are grooved and beaded. The joints are so secure that grouting is not necessary, although a mastic filler is used when damp-proofing is specified.

Due to the diagonal joints, reinforcing rods impinge upon both ends of all staves. As many additional rods are drawn around the bodies of the staves as needed to resist lateral pressure.

This patented design makes the N & F Silo a structure of distinctive strength and solidity. The corrosion-resistant materials assure long life with virtually no maintenance cost.

It will pay you to get complete information. Write, wire, or phone

THE NEFF & FRY CO., Camden, Ohio



NEFF & FRY
SUPER-CONCRETE STAVE
STORAGE BINS
FOR ALL SORTS OF
FLOWABLE BULK MATERIALS

were worked off and supplies tightened with good gains to both meal and beans.

Supplies of soybeans for 1949-50 from present indications will be the second largest of record and are estimated at 218 million bushels, a drop of only 2 percent from last year's record, reports the U. S. Department of Agriculture. Crushings of soybeans during the 1948-49 season were the largest of record and totalled almost 183.6 million bushels.

In its 1950 outlook report, the Bureau of Agricultural Economics said a continued price decline will accompany the expected record production of 11 billion 800 million pounds of fats and oils.

It also forecast a smaller demand but added that the lower prices may attract European and South American buyers. Prices of lard, edible vegetable oils, inedible tallow, greases and soybeans are particularly attractive for export, the department said.

Production of all fats and oils will top last year's peak by more than 200 million pounds.

Cottonseed oil production will increase moderately as a result of a larger 1949 crop of cottonseed. However, output of both soybean and peanut oils should be smaller because of a decrease in soybean and peanut crops. Corn oil output is expected to be the same as last year.

December No. 2 soybeans in Chicago opened at $2.27 for the month and closed at $2.30. Low was $2.22 Nov. 12-14 and 17. High was $2.31 Nov. 26-28.

Bulk soybean oil meal, Decatur, opened at $58, the low, and closed at $61. The high was $63 Nov. 28.

Crude soybean oil in tankcars opened for the month at 9¾c and closed at 9¾c. Low was 9¼c Dec. 15; high was 10¼c Dec. 26.

MEMPHIS SOYBEAN OIL MEAL FUTURES CLOSINGS NOV. 30*

Decatur sacked basis, per ton: Dec. 64.75@65.30; Jan. 64.75@65.30; Mar. flat 4.60; May 64.10@64.90; July flat 64.00; Oct. b 57.50.
Sales: 9,400 tons.

NEW YORK CRUDE SOYBEAN OIL FUTURES CLOSINGS NOV. 30*

Close: Jan., 9.70b; Feb., 9.60b; April, 9.30b; May, 9.15b; June, 9.10b; July, 9.05b; Aug., 9.00b; Sept., 8.65b; Oct., 8.75b; Nov., 8.65b.
Sales: 2 contracts.
*Reported by Chicago Journal of Commerce.

● **EXPORTS TO PRIVATE TRADE.** Secretary of Agriculture Charles F. Brannan has announced that, with only a few exceptions all countries will be permitted, effective Oct. 31, to procure supplies of wheat, flax and soybeans in the United States from private suppliers. This action opens the way for exports of these commodities through the normal channels of trade on the same basis which is now in effect with respect to the export of flour and whole grains other than wheat.

The exceptions to the complete opening of these exports to private trade are for shipments to the occupied zones in Germany and Japan, and to Korea, Austria, Trieste, Greece and China.

For all other countries, arrangements can be made to secure supplies of wheat, flax and soybeans directly from private U. S. exporters, if the importing countries indicate that it is their preference to handle imports through private trade channels.

● **SHORTENING SHIPMENTS.** Reported by Institute of Shortening and Edible Oils, Inc., in pounds.

Week ending Oct. 29	5,027,548
Week ending Nov. 5	4,801,877
Week ending Nov. 12	5,216,035
Week ending Nov. 19	5,699,362
Week ending Nov. 26	4,953,969

Grand total of shortening and edible oil shipments in October was 238,371,000 lbs.

● OIL MILL PRODUCTS. Reported by Bureau of Census Department of Commerce.

SOYBEANS: RECEIPTS, CRUSHINGS AND STOCKS AT OIL MILLS, BY STATES, SEPTEMBER 1949—AUGUST 1949
(Tons of 2,000 pounds)

State	Receipts at mills		Crushed or used		Stocks at mills	
	Sept. 1949	Aug. 1949	Sept. 1949	Aug. 1949	Sept. 30 1949	Aug. 31, 1949
United States	480,944	228,685	359,729	406,518	317,698	196,483
Arkansas	(1)	(1)	2,687	5,442	6,267	(1)
Illinois	252,292	92,849	147,667	165,861	173,230	68,605
Indiana	(1)	(1)	36,352	36,014	22,912	(1)
Iowa	76,786	59,061	66,782	82,298	46,006	36,002
Kansas	7,776	1,987	3,895	7,892	6,642	2,761
Kentucky	12,095	1,959	15,532	11,300	5,903	9,340
Minnesota	20,776	11,888	14,627	14,889	9,761	3,612
Missouri	32,290	5,669	16,481	23,233	28,859	13,050
Nebraska	(1)	(1)	(1)	(1)	(1)	(1)
North Carolina	(1)	(1)	(1)	2,045	(1)	(1)
Ohio	17,497	17,177	48,450	43,230	7,439	38,392
All other	61,432	38,095	7,256	14,314	10,679	24,721

[1] Included in "all other" to avoid disclosure of individual operations.

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, SEPTEMBER 1949—AUGUST 1949

State	Crude oil (thousand pounds)				Cake and meal (tons)			
	Production		Stocks		Production		Stocks	
	Sept. 1949	Aug. 1949	Sept. 30, 1949	Aug. 31, 1949	Sept. 1949	Aug. 1949	Sept. 30, 1949	Aug. 31, 1949
U. S.	120,756	136,015	20,012	26,574	279,859	318,938	13,317	20,376
Arkansas	883	1,535	(1)	(1)	2,150	4,306	(1)	(1)
Illinois	50,420	56,866	6,548	9,079	109,618	123,300	3,781	5,542
Indiana	12,098	12,238	1,168	1,527	28,704	28,551	1,146	1,445
Iowa	22,447	28,069	4,226	6,937	55,395	67,856	3,150	4,757
Kansas	1,402	2,600	542	1,009	3,329	6,363	(1)	(1)
Kentucky	5,656	3,950	415	526	12,261	8,905	397	654
Minnesota	4,780	4,871	1,403	912	11,718	12,226	206	212
Missouri	5,260	7,292	811	867	13,232	18,956	1,997	2,312
Nebraska	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
N. Carolina	(1)	575	(1)	470	(1)	1,624	(1)	(1)
Ohio	15,583	13,568	3,021	2,610	37,665	34,754	1,308	2,272
Oklahoma							(1)	(1)
All other	2,227	4,451	1,878	2,637	5,787	12,097	1,332	3,182

[1] Included in "All other" to avoid disclosure of individual operations.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, SEPTEMBER 1949—AUGUST 1949

Products	Production		Shipments and transfers		End of month stocks	
	Sept. 1949	Aug. 1949	Sept. 1949	Aug. 1949	Sept. 30, 1949	Aug. 31, 1949
SOYBEAN:						
Cake and meal*	279,859	318,938	286,918	319,828	13,317	20,376
Lecithin**	899,495	954,800	1,041,444	1,064,779	840,629	982,578
Edible soy flour, full fat*	(1)	345	394	306	(1)	148
Edible soy flour, other*	4,755	6,585	4,857	6,920	1,111	1,213
Industrial soy flour*	(1)	(1)	(1)	(1)	(1)	(1)

* Unit of measure in tons.
** Unit of measure in pounds.
[1] Not shown to avoid disclosure of individual operations.

● SOYBEAN STOCKS. Production and Marketing Administration's commercial grain stock reports for Nov. 1-22.

	Nov. 1	Nov. 8	Nov. 15	Nov. 22
Atlantic Coast	258	603	663	698
Gulf Coast	449	678	665	346
Northwestern and Upper Lake	722	801	933	907
Lower Lake	3,384	4,846	5,984	6,603
East Central	2,133	2,602	2,706	2,998
West Central, Southwestern & Western	2,160,	2,418	2,868	3,327
Total current week	9,106	11,948	13,819	14,879
Total year ago	8,433	11,043	13,548	14,868

Stocks of only 3,095,000 bushels of old soybeans remained in all storage positions on Oct. 1, the Bureau of Agricultural Economics reports. While slightly more than the 2,564,000 bushels on October 1, 1948, this is otherwise the smallest carryover in the available series beginning in 1942. Largest carryover stocks were 14.2 million bushels on October 1, 1944.

Included in the current carryover were 2,134,000 bushels on farms and 214,000 bushels at interior mills, elevators and warehouses, both estimates of the Crop Reporting Board. Commercial stocks of 462,000 bushels at terminals were reported by the Production and Marketing Administration. Stocks at processing plants,

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as reported to the Bureau of the Census, included both old and new crop soybeans, but this total has been adjusted to only 285,000 bushels of old soybeans on the basis of information obtained by the Crop Reporting Board.

Disappearance of soybeans since July 1 is computed at about 37 million bushels. Reports from the Bureau of the Census show 40.8 million bushels processed in the July-September quarter, but of these several million bushels are indicated by trade sources to have been new crop soybeans processed during September. From the October 1, 1948, supply of about 223 million bushels, the crop-year disappearance is indicated at about 219.7 million bushels, of which 183.6 million bushels were processed. Some 1948 crop soybeans were processed prior to October, 1948, just as some from the 1949 crop were processed in September. New crop soybeans were rapidly moving into storage and to processors before October 1, reflecting the early maturity of the 1949 crop.

STOCKS OF OLD SOYBEANS, OCTOBER 1, 1949, WITH COMPARISONS

Position	Reported by	Oct. 1 1947	Oct. 1, 1948	July 1, 1949	Oct. 1, 1949
			Thousand bushels		
On Farms		2,236	1,838	9,416	2,134
Processing Plants		2,813[1]	468	18,333[1]	285
Terminals		68	130	3,294	462
Int. Mills, Elev. & Whses.[2]		244	128	9,134	214
TOTAL		5,361	2,564	40,177	3,095

Crop Reporting Board, Grain Branch, P.M.U., Board of Census, Crop Reporting Board.

[1] Adjusted to stocks of old soybeans; total October 1, 1949 was 10,590,000 bushels.

[2] All off-farm storages not otherwise designated.

OFF-FARM [1] STOCKS OF SOYBEANS, OCTOBER 1, 1949, WITH COMPARISONS

State	[2] Oct. 1, 1948	July 1, 1949	[2] Oct. 1, 1949
		Thousand Bushels	
Ohio	237	3,540	138
Ind.	40	2,034	27
Ill.	97	11,219	59
Minn.	12	2,156	37
Iowa	39	6,595	219
Mo.	86	1,825	242
Kans.	0	327	1
N. C.	0	117	1
Ky.	2	879	1
All other States	213	2,069	236
U. S.	726	30,761	961

[1] Includes stocks at processing plants, as enumerated by the Bureau of the Census; commercial stocks at terminals, reported by the Grain Branch, P.M.A.; and stocks in interior mills, elevators and warehouses, estimated by the Crop Reporting Board.

[2] Adjusted to stock of old soybeans only.

● **FACTORY USE SOYBEAN OIL.** Factory production of crude soybean oil in September totaled 120,756,000 lbs.; in August 136,015,000 lbs. Production of refined soybean oil in September totaled 127,703,000 lbs.; in August 135,106,000 lbs., according to Bureau of the Census.

Factory consumption of crude soybean oil in September totaled 138,051,000 lbs.; in August 145,924,000 lbs. Factory consumption of refined soybean oil in September totaled 136,199,000 lbs.; in August 141,462,000 lbs.

Factory and warehouse stocks of crude soybean oil totaled 56,223,000 lbs. Sept. 30; 71,925,000 lbs. Aug. 31. Stocks of refined soybean oil totaled 56,790,000 lbs. Sept. 30; 76,384,000 lbs. Aug. 31.

Factory consumption of crude soybean oil in August included (inedible products): soap 174,000 lbs.; paint and varnish 277,000 lbs.; lubricants and greases 69,000 lbs.; and other inedible products 1,218,000 lbs.

Edible uses of refined soybean oil in August: shortening 55,045,000 lbs.; margarine 2,166,000 lbs.; other 4,897,000 lbs.

Inedible uses of refined soybean oil in August: soap

20,000 lbs.; paint and varnish 8,377,000 lbs.; lubricants and greases 6,000 lbs.; linoleum and oilcloth 2,418,000 lbs.; other 4,769,000 lbs.

Factory consumption of crude soybean oil in September included (inedible products): soap 83,000 lbs.; paint and varnish 265,000 lbs.; lubricants and greases 35,000 lbs.; other 1,563,000 lbs.

Edible uses of refined soybean oil in September: shortening 54,531,000 lbs.; margarine 1,927,000 lbs.; other 4,454,000 lbs.

Inedible uses of refined soybean oil in September: soap 45,000 lbs.; chemicals 954,000 lbs.; paint and varnish 7,816,000 lbs.; linoleum and oilcloth 2,672,000 lbs.; other 5,873,000 lbs.

● SOYBEAN INSPECTIONS. Inspected receipts of soybeans during October the first month of the 1949-50 season, were 23 percent larger than the previous record established October 1948 and were of good quality, according to reports to the Department of Agriculture. October receipts totaled 44,153 cars compared with 35,861 cars a year ago and 31,606 cars the 5-year average for the month of October for the crop years 1943-47.

The quality of the 1949 crop, as indicated by the October inspections, is considerably better than that of last year but is somewhat below the excellent 1947 crop and also slightly below average. Eighty-six percent graded No. 2 or better in October compared with 78 percent last year, 92 percent in 1947, and 89 percent the October (1943-47) average.

Inspections of soybeans in October included the equivalent of 703 cars inspected as cargo lots and about 2,792 cars as truck receipts.

● U.S. EXPORTS FATS, OILS. The following table shows United States exports of specified fats, oils, and oilseeds during January-September 1949 with comparisons, as reported by Foreign Crops and Markets:

UNITED STATES: Exports of specified fats, oils, and oilseeds, January-September 1949 with comparisons

Commodity	Unit	Average 1935-39	1947	January-September 1948*	1948*	1949*
Soybeans	1,000 bu.	† 4,793	2,505	6,497	2,319	18,832
Soybean oil						
Refined	1,000 lbs.	(	38,883	41,266	32,976	168,943
Crude	1,000 lbs.	‡ (6,467	68,395	41,769	36,793	116,832
Coconut oil						
Refined	1,000 lbs.	3,789	5,491	9,273	8,556	3,002
Crude	1,000 lbs.	10,442	52,427	9,820	9,448	7,628
Cottonseed oil						
Refined	1,000 lbs.	4,793	10,977	22,672	20,496	44,910
Crude	1,000 lbs.	1,515	901	10,094	3,351	38,510
Flaxseed	1,000 bu.	‡	16	1,650	15	3,039
Linseed oil	1,000 lbs.	1,280	9,855	29,636	24,744	3,257
Peanuts						
Shelled	1,000 lbs.	(	212,253	458,655	250,821	319,413
Unshelled	1,000 lbs.	‡ (452	18,681	10,594	6,510	5,169
P'nut oil, refined	1,000 lbs.	§ 325	1,579	685	667	20,676
Cooking fats	1,000 lbs.	2,111	3,594	3,522	2,518	18,246
Lard	1,000 lbs.	165,636	380,735	271,835	199,081	477,316
Oleomargarine	1,000 lbs.	180	19,954	3,408	2,952	1,549
Tallow						
Edible	1,000 lbs.	(	601	1,377	1,267	20,546
Inedible	1,000 lbs.	‡ (1,651	54,563	67,995	43,233	287,434

*Preliminary. †Average of less than 5 years. ‡Not separately classified in Foreign Commerce and Navigation. §1939 only. Compiled fom official sources.

● SOYBEAN GLUE. Consumption of soybean glue by the softwood plywood industry in September was 2,977,000 lbs. compared with 3,045,000 lbs. in August; and 2,836,000 lbs. in Sept. 1948, reports Bureau of the Census.

Consumption of phenolic resin glue in September was 2,687,000 lbs. Total consumption of all glues in September was 6,327,000 lbs. compared with 6,595,000 lbs. in August; and 7,374,000 lbs. in Sept. 1948.

Stocks of soybean glue totaled 1,348,000 lbs. Sept. 30; 1,407,000 lbs. Aug. 31; and 1,516,000 lbs. Sept. 30, 1948.

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SOYBEAN GROWER CAN'T BUY OIL MEAL!

To the Editor:

I am a farmer, a small farmer, owning 320 acres of this rich Delta land. We diversify between cotton, soybeans, alfalfa, corn and pasture, with livestock and poultry as supplemental income and for home use. This is a money-making place, as attested by income tax returns by myself and co-workers.

One of our obstacles, over a period of years, has been the inability to purchase locally, one, two or three sacks of soybean meal, as we need it, for mixing with our own ground corn for poultry and livestock feeding. When we had 1,000 laying hens we would drive to the Swift mill at Blytheville, Ark., 37 miles away, and get a ton. The OPA regulations, as well as the poor labor supply during the war years put us out of the poultry and sheep business in a large way, so now we are like hundreds of other small farmers, needing only a bag or two of soybean meal at a time. I have made three trips, 26 miles round trip each, to the most likely source in the last month and each time they were out of meal. None of the local merchants or feed stores stock it that I know of.

A year ago we fattened a yearling for December killing but the meat plainly showed the lack of protein supplement. We are fattening another now, also lacking the protein element.

This latter is not intended as the complaint of a lone, single farmer. It is intended primarily to awaken an aggressive merchandising campaign and to stir up the necessary enterprise from the big manufacturers down to the local merchants, so as to make soybean meal a staple instead of a scarcity. *As it is now, here we are, in the center of a great soybean area, (90 acres of soybeans on this farm) and unable to buy a sack of soybean meal.*

On this farm there are nine families feeding kitchen slop to hogs. They are buying wheat shorts, (low in protein) to thicken the slop. I could easily educate them to put in some soybean meal, but to little avail as the local stores, here as elsewhere throughout the Delta, do not stock it. Multiply this instance by the thousands and you have a broad, potential and steady market for the meal, now unserved, uneducated and unsung.

I explain to my people that what butter means to them on their bread and biscuits, is exactly what soybean meal means in the nutrition supplied to cows, calves, hogs and poultry. Just a couple of pounds with the slop; or 10 pounds to the hundred of corn. The meal makes the meat. The corn makes the fat. Put both together and you get more of each. We require 16 pounds of soybean meal per hundred pounds of our poultry mash. The frequent inability to obtain soybean meal for this mash has reduced egg production one half. Chickens are very sensitive to any change in the formulas of their regular feed.

The average plantation tenant, like the average farmer, is a realist and understands quickly a realistic, down-to-earth explanation of fact.

There is little comfort to us, in our realistic situation, to read about the selection of a National Soybean Queen. They didn't need Queens or Maids of Cotton contests to merchandise and extend the markets for condensed milk or kerosene to the distant Orient. The two principal cash crops of the Delta, soybeans as well as cotton, need intelligent merchandising. I think I would be among the first to herald such form of merchandising, as for many years I was a department store executive, and know something about merchandising in the most competitive line of business in America.

What our products need on the part of those who merchandise them is a sympathetic understanding of people and their daily needs, both here at home in the Delta, and in the other markets in this country and the many countries overseas. Seeking such actual understanding and supplying the answers in enterprise and action, on a practical basis, means more than mahogany paneled executive offices, brass bands and beauty contests in my humble opinion. — *Edgar Gengenbach, Farmer, Netherlands, Mo.*

Meal Picture

To the Editor:

In your October, 1949 issue, page 4, Editor's Desk, your editor, Geo. M. Strayer, writes from Germany, "European countries are anxious to buy 1949-crop soybeans because they are still the cheapest source of edible oil at any point in world trade." Is this not also true of soybean meal?

Now I wish to quote from article in Pickell & Daniel daily bulletin published in Chicago, Ill., Aug. 20, 1949, "The fact that *ECA has been persuaded* to allot 30-40 million dollars for exports of soybeans this year . . . is indicative of the power of the Soybean Association." Can you confirm above allocation as applying to soybean crop now being marketed?

Can we look to larger domestic use of soybean meal in 1949-50 on account of so many more hogs than last year and more cattle to feed? Of course exports are the vital bulwark.—*Albert M. Adams, 141 W. Jackson St. Chicago, Ill.*

ECA has set up rather extensive allocations of funds for purchase of oilseed crops and proteins by European countries. So long as soybeans stay in their present price relationship the major purchases will be of soybeans. With probable reductions in cotton and flax acreage in 1950 there should be a broadening market for soybean oil meal in 1950.—Editor.

Doesn't Like Soybeans

To the Editor:

We have recently received your soybean circular. Before I would allow my name to be associated with soybeans, as you do, I would sweep the streets of Hudson.

Fifty years from now if we are living like Chinese coolies we have only you to thank. Do you know the Cleveland market is smart enough to refuse pork fed on soybean meal? The meat is no good—the lard will not set. Poultry fed and finished on soybean supplement tastes of soybean.

The oleo manufacturers in their eagerness to continue their excessive profits are hiding behind the skirts of the foolish farmers who raise these soil destroyers.

I bet *you* do not eat oleomargarine nor do the boys who are using you as a front for a prosperous scheme that will ruin the country.

May your sons and their sons be plagued with rickets as they say in Chinese.—*Mrs. Howard R. Cummings, Rt. 1, Willard, Ohio.*

If soybean oil meal ruins pork and poultry, then most pork and poultry reaching the market today is ruined.—Editor.

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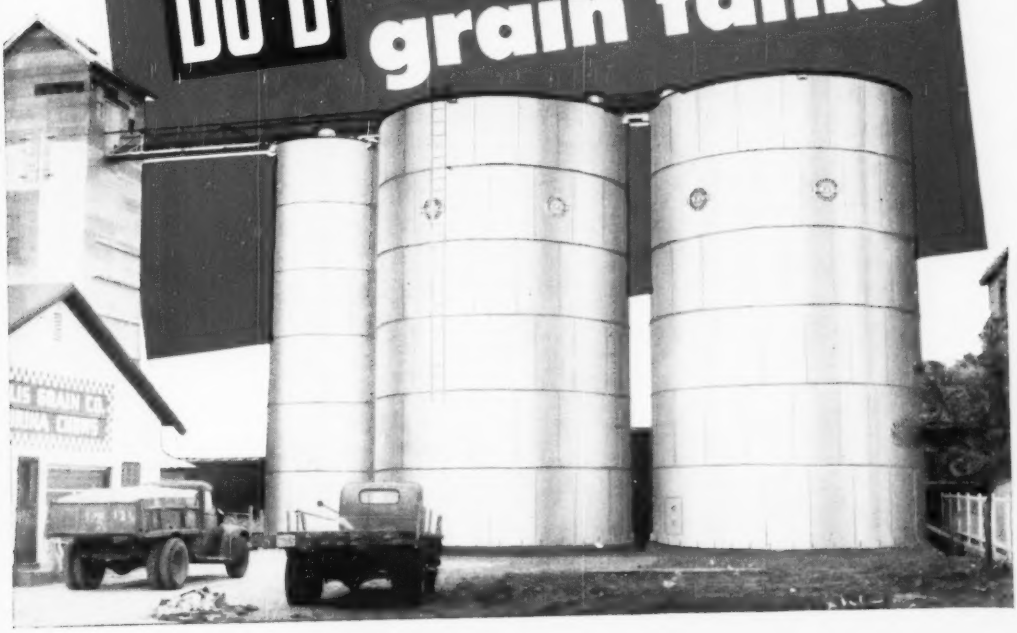

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